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Department of Marine and Fisheries, Canada

METEOROLOGICAL SERVICE

MONTHLY WEATHER REVIEW

BY

R. F. STUPART, Director.

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DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. JANUARY, 1910. No. 1.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

In British Columbia the mean temperature of January was from 0·5° to 2° below average over Vancouver Island and the southwestern mainland, and also in the region north of the Cariboo Range and the Skeena River. In the Central districts, the Middle Valley of the Fraser and east of the Selkirks, the mean temperature was average or slightly above. Precipitation was heavy in the latter part of the month on the lower mainland and on the lower levels generally. At the higher levels the average was not reached.

In Alberta, Saskatchewan and Manitoba, the mean temperature of January was several degrees above average. The most marked departure from the normal occurred in southeastern Alberta and southwestern Saskatchewan, where the average was exceeded by from 9° to 12°. Over the three provinces the range of difference above average was from 3° to 13°. In Alberta at the close of the month maximum temperatures of 45° to 55° were registered; in Saskatchewan 40° to 45°; in Manitoba less than 35°. In all three provinces precipitation was light and much below average. The month was reported to have been a very favourable one for stock, with cattle in fine condition on all ranges.

In Ontario the weather was very cold from the 3rd to the 10th, on the 15th and 16th and on the 31st, temperatures below zero being registered on several days. The remainder of the month was comparatively mild and cloudy. Locally in the southern peninsula the mean temperature of the month was slightly below average, but, roughly, the mean temperature ranged from 1° to 3° above average in the peninsula to 5° to 6° above average in the Ottawa Valley and districts north and east of the Georgian Bay; and in the Lake Superior Districts the average was exceeded by about 4°. The total precipitation for the month was considerably above average at places in the central counties, but over the province varied very much, both above and below average.

In Quebec the mean temperature of the month was from 6° to 11° above the average of the preceding twenty years, maximum temperatures of about 50° occurring at the beginning of the last week. The first ten days of the month, however, were very cold. Except locally in western Quebec, the amount of precipitation during the month was slightly above the average.

In the Maritime Provinces the mean temperature of the month was from 5° to 8° above the average. Over the greater part of the three provinces the amount of precipiation was considerably in excess of the average. For the first fifteen days the weather was very cold with minimum temperatures below zero. At the end of the month temperatures higher than 55° occurred.

ATMOSPHERIC PRESSURE.

The normal value of the mean atmospheric pressure was reached in the Thunder Bay district of Ontario, and the mean value increased eastwards and decreased westwards from that region.

Negative departures from average were large, reaching —0·24 of an inch at Edmonton, Alta., while the positive differences were not, as a rule, very pronounced, the maximum being + 0·10 of an inch at Chatham, N.B., Halifax and Sydney, N.S.

HIGH AREAS.

Eight areas of high pressure were charted during the month. Two first appeared in the Yukon Territory, one in southern British Columbia and five in the west Pacific States. At first the systems displayed considerable energy, attended by much cold weather, but from the middle until the close of January they were usually of no intensity; one carried its centre well to the northward of the Lake Region, three passed over the Lake Region, while the remaining four moved far to the southward of the Lake Region.

LOW AREAS.

Fourteen areas of low pressure were charted during the month; four first appeared on the Alaskan coast, one on the Northern British Columbia coast, one on the Oregon coast, two in the west Pacific States, three in the southwestern States, two in the vicinity of the West Indies and one to the northward of Lake Superior. The general track of the areas was either over or to the southward of the Lake Region, thence over the Maritime Provinces and Newfoundland. These systems were usually of much energy and their presence was often marked by both very strong breezes and gales, the latter being especially frequent in the Lake Region and the Maritime Provinces.

WINDS.

In British Columbia, on Vancouver Island and over the mainland, the south and east directions were most in evidence, with eleven days with strong breezes, occasionally reaching the force of a gale, and seven days with fresh breezes.

In Alberta and Saskatchewan the south and west directions predominated, with four days with strong and thirteen and eleven days respectively with fresh breezes.

In Manitoba the direction was variable, with five days with strong and eight with fresh breezes and three moderate gales.

In the Lake Region the direction was variable with eight days with strong and nine with fresh breezes and six gales.

In the Ottawa and Upper St. Lawrence Valleys the direction was variable with eight days with strong and twelve with fresh breezes and three gales.

In the Lower St. Lawrence Valley and the Gulf the direction was variable with thirteen days with strong and seven with fresh breezes and five gales.

In the Maritime Provinces the direction favoured slightly the north and west, with five days with strong and twelve with fresh breezes and eight gales, the latter occurring on the 2nd, 4th, 7th, 10th, 15th; between the 18th and 19th, on the 22nd, and between the 29th and 30th.

In the Maritime Provinces where in many localities winter navigation is pursued, the gales were all warned, but a warning issued on the 25th instant, for a moderate gale, was not subsequently justified by dangerous winds.

TEMPERATURES.

The mean temperature of January exceeded the average considerably in the Western Provinces and over the greater part of Ontario, Quebec and the Maritime Provinces. In British Columbia, the normal was exceeded in the central districts, but was below average elsewhere. In Alberta and Saskatchewan the difference from normal was exceptionally large, amounting to 13 degrees above the average at some stations.

The highest and lowest temperatures recorded in each Province during the month of January, 1910, were:

British Columbia,	58° at Agassiz on the 30th,	—33° at Chilcotin on the 1st.
Alberta,	60° at Lethbridge on the 24th,	—35° at Banff on the 2nd.
Saskatchewan,	47° at Swift Current on the 30th,	—46° at Prince Albert on the 3rd.
Manitoba,	42° at Morden on the 31st,	—40° at Swan River on the 3rd.
Ontario,	58° at Otonabee on the 20th,	—34° at White River on the 24th.
Quebec,	52° at Cape Chatte on the 21st, and at Brome on 22nd.	—33° at Abitibi on the 10th.
New Brunswick,	55° at Fredericton on the 22nd,	—20° at Fredericton on the 15th.
Nova Scotia,	57° at Windsor on the 30th,	—18° at Truro on the 1st.
P. E. Island,	49° at Hamilton on the 23rd and 27th,	—0° at Charlottetown on the 14th.

PRECIPITATION.

On the lower mainland and the lower levels of British Columbia, locally in Ontario, generally in Quebec and in the Maritime Provinces, the amount of precipitation was above the average of the last twenty years, but the difference was not great except in the Maritime Provinces. Elsewhere in Canada the amount of precipitation was very light.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month of January was below the average, except in Alberta, Saskatchewan and western Manitoba.

DEPTH OF SNOW.

At the close of the month the ground was snow covered from Saskatchewan to the Maritime Provinces. In those portions of the Western Provinces where there was snow on the ground, the depth varied from 1 to 12 inches, the same being also the case in the Maritime Provinces. In Ontario, in the vicinity of the Georgian Bay and the Highlands of Muskoka the depth was from 26 to 36 inches, while other parts of the province were covered to a depth of from 3 to 15 inches only. In the vicinity of Quebec city there were some 33 inches of snow on the ground, while over the remainder of the province the depth generally exceeded 14 inches.

THICKNESS OF ICE.

Thickness of ice was reported as follows :—

Western Provinces—Edmonton, 25 inches; Battleford, 24 inches; Medicine Hat, 18 inches; Swift Current, 30 inches; Moose Jaw, 30 inches; Minnedosa, 12 inches.

Ontario—Port Arthur, 7 inches; Bruce Mines, 14 inches; Barrie, 15 inches ; Owen Sound, 3 inches ; Southampton, 24 inches ; Lucknow, 15 inches ; Port Stanley, 12 inches ; Port Burwell, 18 inches; Georgetown, 15 inches; Toronto, 15 inches; Kingston, 9 inches; Renfrew, 16 inches.

Maritime Provinces—Chatham, 7 inches, Charlottetown, 3·5 inches.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JANUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.				TEMPERATURE.									Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM									Total number of observations.	VELOCITY OF WIND.			PRECIPITATION.				Days with '01 or more.	No. of fair days.	No. of rain rls.	No. of thunder storms	No. of fogs.
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observ'n	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.		Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in month.						
BRITISH COLUMBIA				In.	In.	In.	In.	°	°		°		°		°		°	%	tenths																					
Alberni (Beaver Creek)	49	15	124	49	300																																				
Agassiz	49	14	121	31	52			37·6	+ 2·7	19	58·0	30	22·0	3	14·7																	1·63	+ 1·71	1	13	13	18	0	1	0
Atlin	59	35	133	38	2240	29·69	30·72	28·72	2·00	10·8	—	1	31·0	6	7	—21·0	15	10·0																							
Barkerville	53	2	121	35	4180	29·83	30·57	29·06	1·51	16·1	—	2·1	20	38·0		23	—20·0	1	9·7																							
Bella Coola	52	40	126	54	150					26·7	+ 0·9	10	40	0		25	7·0	1	3	10·1																						
Babine Lake								12·1	—		2	37·0		28	29·0	1	2	15·5																						
Chilcotin (Big Creek)	51	40	123	0	3100			11·2	—	7	40	0	21	29	—33·0	1	26·8																							
Chilliwack	49	10	121	57	21																																			
Cranbrook	49	30	115	50				15·9	—	1	44·0		21		21·0	2	18·6																							
Clayoquot	49	11	125	17	10			38·5	— 1·1	11	50·0		23		32·0	2	10·0																							
Cowichan (Tzouhalem)	48	25	123	12	170			35·9	—		1	46·3		22	13·5	2	9·3																							
Estevan Point	49	25	126	28		29·91	30·68	29·15	1·53	37·3	—	2	48·0	15	23	22·0	2	9·4		93	8	18	4	0	15	18	3	2	6	2	12	62	16·8	60·0		22·11		1·62	21·7	0	1	3
Enderby	50	32	119	7	1180			23·6	—	8	43·0		30		8·0	2	15·3																							
Fairview								25·3	—	1	41·0		30		0·3	6	32·3																							
Glacier	51	14	117	29	4072			13·9	—	9	35·0		25		—12·0	3																							
Golden	51	16	116	55	2550			12·3	—	8	40·0		25		2·5·0	2	17·6																							
Holberg								33·3	—	1	45·2		30		12·7	2	5·1																							
Hedley	49	35	120	10				25·7	—	6	44·0		21		8·0	1	16·1																							
Hedley (Nickel Plate)								13·2	—	5	38·0		23		19·0	2	12·7																							
Ikeda Bay	52	17	131	7	5			31·9	—	2	45·0		29		27·0	7	10	9·1																						
Kamloops	50	11	120	20	1245	29·98	30·75	29·08	1·67	25·0	+ 0·3	19	51	3		23	— 8·5	2	12·4		81	6	6	1	13	9	8	5	5	1	0	17	62	6·3	20·0		3·22	— 0·61	1·19	9·22	0	0	0
Ladner	49	5	123	4					—		11	49·0		22	9·0	1	—																							
Masselt, Q.C.I	53	58	132	9	30			36·7	+ 0·6	13	45·0		27		25·0	31	10·0																							
Midway	49	0	118	50	1800																																			
aNanaimo	49	10	123	37	125	29·81	30·55	29·30	1·25	35·9	—	10	47·9		24	18·5	2	8·6		93	8	15	0	7	0	19	1	9	4	6	17	93	7·3	30·0		6·21	— 0·29	0·85	20·11	0	0	1
Nicola Lake	50	9	120	30	2120			20·4	— 1·1	15	45·0		23		18·0	2	12·7																							
North Nicomen	49	12	122	2	50			31·6	— 0·9	18	49·0		24		11·0	1	9·8																							
New Westminster	49	13	122	54	330	30·01	30·70	29·35	1·35	31·7	— 0·7	23	47·0		23	12·0	2	8·4		92	8	19	1	8	21	3	2	7	3	0	17	62	4·6	20·0	18W	10·81	— 2·67	1·50	22·9	0	0	0
Needles								23·4	—	1	41·0		23		2·0	16	10·6																							
Nelson	49	29	117	21	1709			27·0	—	8	44·0	23	27	—	2·0	3	8·7																							
Okanagan Mission (Kelowna)	49	52	119	29	1200			26·1	+ 0·3	10	48·0		24		8·0	2	11·5																							
Port Simpson	54	31	130	26	26	29·71	30·58	28·05	1·93	33·1	— 0·7	24	43·0		26	15·6	2	5·6		92	9	22	3	5	12	11	5	1	1	1	23	62	5·3	23·0	2 S E	7·15	— 2·83	1·01	21·7	0	1	0
Princeton	49	29	120	29	1650			17·2	— 0·6	11	37·0		21		24·0	2	18·7																							
Penticton								28·3	—	1	48·0		24		1·0	2	11·5																							
Pemberton Hatchery								25·5	—	2	40·0	18	26		0·5	1	9·3																							
Prince Rupert	54	18	130	18																																			
Quesnelle	52	30	122	30	1700			17·3	+ 2·5	15	45·0		28		25·0	2	21·5																							
Revelstoke	51	0	118	6	1176			22·0	— 1·1	11	40·0		24		12·0	1	10·5																							
Rossland	49	5	117	18	3400			22·3		7	40·5		24	—	1·4	3	7·6																							
Ruskin (Stave Falls)	49	16	122	23	125			34·2	—	1	48·0		28		13·0	1	9·1																							
Stuart's Lake (Fort St. James)	54	28	124	12	2280			14·8	+ 5·1	17	41·0		30	—	33·0	2	21·0																							
Salmon Arm	50	12	119	35	1245			24·8	—	9	46·0		24		12·0	1	12·2																							
Steveston (Garry Point)	49	21	123	17				35·1	— 0·6	11	49·0		23		16·0	1	9·5																							
Swanson Bay								32·1	—	2	39·0		29		16·0	1	5·1																							
Salt Spring Island	48	50	123	20				37·5	—	1	50·0		3		17·5	2	9·5																							
Summerland	49	57	119	0	1100			24·0	—	3	43·0		24		1·5	3	12·6																							
Tobacco Plains (Elko)	49	1	115	5	2681			22·2	— 0·7	14	46·0		23		9·9	5	12·6																							
aTranquille	50	11	120	29		28·71	29·18	28·06	1·12	24·1	—	2	36·0		30	10·0	2	11·9		76	7	11	5	12	38	19	4	5	2	5	0	90									
Vernon (Coldstream Ranch)	50	11	119	15	1575			32·3	+ 0·1	16	42·0		18		11·0	2	12·0																							
Victoria	48	21	123	19	85	29·96	30·61	29·17	1·52	38·7	— 1·1	18	51·2		23	23·8	3	7·7		86	8	8	18	9	13	5	2	8	7	0	0	62	10·7	32·0	12 S E	1·54	+ 0·30	1·17	18·13	0	0	0
Vancouver	49	17	123	5	136	30·01	30·71	29·21	1·50	36·0	—		46·0		23	14·6	2	7·4		81	8	12	0	2	28	22	0	4	4	0	2	62	5·0	15·0	12 S E	11·19	—	1·54	22·9	0	0	1
Winter Harbour	50	32	128	3				35·9	— 1·2	11	49·0		29		24·0	2	8·4																							
Wilmer								10·7	—	1	39·0		30		—28·0	2	19·1																							

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JANUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of persons.	No. of thunder storms.	No. of fogs.
				in.	In.	in.	in.																																	
MANITOBA—																																								
Almasippi	49	11	99 20					7·7	—	8	38·0	19	−28·0	4	20·8																									
*a*Aweme (St. Alban's)	49	12	99 33	1180	28·71	29·31	28·21	1·43	5·4	+ 8·3	23	33·5	30	−36·0	4	21·9																								
Brandon	49	51	99 57	1176					3·9	+ 6·6	23	32·9	31	− 38·3	1	23·6				5	1	0	5	1	9	2	16	17	12	1	93	1	III	1 SW	0·20	−0·63	0·20	1	30	0	0	0
Birtle	50	25	101 1	1703																																				
Berens River	52	18	97 23	710					0·3	—	3	27·0	27	−35·0	1	22 3																								
Carberry	49	52	99 20	1258																																				
Carman	49	31	98 0	872																																				
Cypress River	49	33	99 3	1232																																				
Hillview	49	55	100 33	1100					5·1	+10·2	21	33·0	31	−34·0	1	16·1				3	2	9	1	8	12	5	12	4	12	0	93				0·20	−0·82	0·10	2	20	0	0	1
Minnedosa	50	15	99 50	1629	30·01	30·77	29·11	1·33	6·0	+ 6·6	26	32·0	12	−36·3	1	18·1				5	1	0	0	0	3	2	0	4	17	36	62				0·03	−0·78	0·01	3	28	3	0	1
Morden	49	11	98 6	978					10·2	—	7	41·5	31	−28 0	4	20·8																								
Oakbank	49	57	96 42	710					5·0	+10·8	15	28·7	26	−37 0	4	11·9						1	0	0	1	3	13	5	7	1	31				0·10	−0·81	0·1	1	30	0	0	0
Pipestone	49	31	100 58	1400																																				
Portage la Prairie	49	57	98 17	850					6·3	+ 9·6	20	35·0	31	−31·0	3	19·5																								
Portage la Prairie (2)	49	56	98 17																																				
Pierson	49	11	101 5	1531																																				
Stony Mountain	50	4	97 14	803					2·9	+ 5·6	28	34·0	20	−38·0	1	20·7						2	1	2	13	12	7	9	15	0	61	11	IV	—	*	0 40	*	0	31	0	0	6
Swan River	52	6	101 15	1112					5·6	—	2	31·0	25-31	− 10·0	3	20·0																								
Treherne	49	36	98 40	1212					1·0	+13·3	11	31·0	19-31	−32·5	4	15·0																								
Virden	49	51	100 55	1441																																				
Winnipeg	49	53	97 7	760	30·16	30·83	29·52	1·31	5·1	+ 8·0	36	32·0	31	−36·2	4	17·1				4	0	5	1	0	19	10	6	8	8	5	62				0·25	−0·58	0·10	7	24	0	0	0
ONTARIO—																																								
Alton	43	54	80 5	1250					16·2	— 1·5	24	39·0	21	−20·5	4	20·9				6	5	4	4	18	3	11	13	36	1	0	93	11	III	—	1·83	−0·41	0 10	12	19	0	0	0
Aurora	43	57	79 24	886					19·7	—	2	38·7	18	−13·4	4	17·7																								
Agincourt	43	47	79 16	890					23·1	+ 1·3	11	40·0	22	− 9·6	4	13·7						6	8	10	2	17	20	24	3	3	93				3·10	+1·10	1·17	15	16	0	0	3
Barrie	44	23	79 41	820					20·2	+ 2·2	32	38·0	18	−17·5	4	13·8				8	10	9	7	4	10	17	13	4	13	16	93	11	IV	—	2·00	−1·81	0·33	20	11	0	0	2
Beatrice	45	8	79 20	840					17·9	+ 1·9	33	38·0	18-21	−23·6	4	17·3				8	37	6	0	1	7	22	6	6	11	31	93	I	IV	—	5·27	+1·17	0·78	17	14	0	0	2
Bruce Mines	46	18	83 55	595					15·2	+ 1·5	13	37·0	20	−26·0	4	18·6																								
Birnam	43	9	81 55	600					22·9	+ 2·2	28	40·0	20	− 1·5	25-31	9·0						1	1	5	1	15	10	10	9	1	62				1·30	−0 19	0 70	5	26	0	0	0
Brantford	43	16	80 21	750					22·8	+ 3·1	29	42·0	18	− 3·0	3	11·1																								
Bloomfield	43	59	77 21	260					22·6	+ 2·2	10	42·0	22	−10 0	4	15·6																								
Bancroft	45	1	77 50						17·1	+ 5·4	21	40·0	18	−27 0	3	18·1																								
Copper Cliff	46	30	80 59						13·1	—	1	41·0	18	−33·0	4	19·8																								
Clinton	43	32	81 37						21·7	—	7	37·0	18-21	− 1·0	10	12·2						0	2	9	3	21	1	7	19	0	62				1·50		0 40	10	21	0	0	0
Coldwater	44	38	79 40	690					18·9	+ 3.6	21	39·0	20-22	−25·0	4	19·7																								
Cockburn Island	45	57	83 18	610					16·9	+ 2·1	13	37·0	2-21	−31·0	31	17·7						5	1	7	6	7	16	7	6	1	62				2·38		0 60	18	13	0	0	0
Cottam	42	7	82 45	606					23·3	— 2·5	22	43·0	27	− 2·0	3-31	17·1																								
Chatham	42	23	82 12	595					25·7	+ 0·9	23	42·0	17	+ 3·0	4	10·8																								
East Toronto	43	35	79 18						23·3	—	3	39·0	18-20	−11·0	4	15·3																								
Elora	43	41	80 24	1274					20·0	+ 2·0	11	39·0	18-21	− 8·0	4	14·0																								
Gravenhurst	44	54	79 20	770					18·0	+ 3·2	30	39·0	18	−22·2	10	18·8				7	9	7	0	13	18	12	9	20	1	10	93	11	V	58E	2·65	0·63	0 10	15	16	0	0	0
Guelph	43	33	80 16	1050					22·1	+ 2·3	22	41·0	18	− 7·0	4	13·6																								
Grimsby				282					25·4	—	1	45·0	19-21	− 5·0	4	13·3																								
Huntsville	45	19	79 8						16·0	—	3	38·0	18	−21·0	9	16·9																								
Haileybury	47	29	79 39	687	30·10	30·91	29·20	1·62	11·3	+ 6·3	16	35·1	1-21	−24·0	10	18·3				8	1	1	5	12	2	2	12	19	62	1	III	—	1·95	−0·07	0·61	15	16	3	0	0
Hamilton	43	16	79 51	303					21·9	+ 1·9	31	42·0	20	− 3·0	1	9.8																								
Haliburton	45	1	78 28	1050					17 8	+ 1·1	21	39·0	18	−20·0	10	18·7																								
Kenora	49	18	94 32	1102					4·8	+ 2·1	11	23·0	28	−32·0	4	12·7																								
Kakabeka Falls	48	20	89 26	912					4·0	—	2	33·0	15 19	−29·0	4	28·1																								
Kingston	44	13	76 29	285	30·12	30·97	29·11	1·86	23·0	+ 4·8	35	46·0	22	− 10·8	4	13·9				8	12	6	11	1	8	2	12	8	10	1	62				2·46	−0·68	0·90	15	16	0	0	0
Kinmount	44	45	78 38	920					9·1	− 3·1	11	35·0	1	−31·0	3	29·3																								

ONTARIO—*Concluded.*

| | | |

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JANUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'n	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION Amount.	Difference from average.	Heaviest fall in month.	Days with '01 or more	No. of fair days.	No. of auroras	No. of thunder storms	No. of fogs.
NEW BRUNSWICK—																																								
Bathurst	47 39	65 42	45																																					
Chatham	47 3	65 28	21	30·08	30·71	29·08	1·63	19·0	+ 7·6	35	52·0			16·0	15	17·9				6	9	2	3	9	1	1	16	25	1	1	62				1·18	+ 0·58	1·3	12	19	0	0	0
Dalhousie	48 1	66 22	39					18·2	+ 2·6	29	45·0			10·0	8	15	11·3					1	1	1	3	1	3	25	1	1	37				2·57	0·57	1·10	3	28	0	0	0
Fredericton	45 57	66 36	164	30·10	30·80	29·21	1·59	19·7	+ 7·0	38	55·3			20·0		15	19·2					1	2	2	5	5	16	12	29	3	93	8·3	21·7	30 W	3·17	1·51	1·31	10	21	0	0	2
Grand Manan	44 47	66 46	19	30·08	30·79	29·05	1·74	30·0	+ 6·5	25	50·8			4·0		11	13·2					2	0	2	1	1	3	6	17	1	62				3·17	1·51	1·31	10	21	0	0	2
Moncton	46 9	64 45	50					25·2	+ 7·0	13	50·0	22	29	12·0	1	11	20·0					1	1	1	1	1	4	9	9	0	31				3·85	1·21	1·10	8	23	0	0	3
*Point Lepreaux	45 1	66 28	30					27·2	+ 7·2	32	47·0		22	5·0	5	—				6	13	10	21	1	5	2	9	6	21	0	0	78	11·1	V	1 N	3·47	0·43	1·57	8	5	0	0	3
St. John	45 17	66 1	70	30·08	30·71	29·21	1·18	27·0	+ 7·3	37	52·5		22	7·7	5	13·9				6	11	10	1	1	6	2	10	6	19	1	62				3·41	1·16	2·46	13	18	0	0	3
St. Stephen	45 11	67 16	35					29·7	+ 7·9	13	51·0		22	12·0	5	17·7																				2·85	1·37	0·56	6	24	0	0	2
Sussex	45 38	65 38	69					28·1	+ 8·1	13	55·0		21	11·0	5	15·8						1	3	0	0	0	7	3	2	15	31				6·38	1·83	1·49	7	21	0	0	0
NOVA SCOTIA—																																								
Halifax	44 39	63 36	88	30·07	30·68	29·31	1·37	28·2	+ 1·1	35	50·5	29	30	1·4	1	5	15·1					1	13	10	6	6	3	10	10	0	62				2·48	+ 3·72	1·28	22	9	0	0	3
Port Hastings	45 39	61 22	15							19	10·0		26	2·0	11	—						1	0	1	8	1	11	0	9	0	31				2·85	1·30	0·46	6	25	0	0	1
Parrsboro'	45 23	64 19	10					24·0	+ 1·9	11	50·0	23	29	5·0	1	16·6																										
Sydney	46 10	60 10	35	30·15	30·60	29·36	1·24	30·0	+ 7·9	36	56·0		30	9·0	4	12·7				9	21	2	6	1	1	0	11	15	20	3	62				6·05	+ 0·85	0·86	18	13	0	0	4
*Sable Island, E. Point	43 58	59 46	25					36·3		25	49·0		23	17·0	1							2	9	0	23	2	25	0	31	0	93				3·15	—	0·82	8	23	0	0	8
Truro	45 22	63 18						24·8	+ 5·5	35	53·6		30	18·5	1	21·6				7	11	2	8	11	8	9	19	8	11	17	93				2·65	0·35	1·81	15	16	0	0	1
Windsor	44 59	64 6	90					27·5	+ 3·9	31	57·0		30	3·0	11	11·4																				3·14	+ 0·27	0·65	17	15	0	0	0
*Whitehead	45 15	61 8	20					29·7	+ 5·1	26	51·0		29	7·0	4																				3·14	+ 0·27	0·65	17	15	0	0	0
Yarmouth	43 50	66 2	65	30·10	30·71	29·28	1·16	31·3	+ 1·7	29	51·6		32	3·8	4	12·6						2	5	8	14	16	25	7	15	0	93				6·30	3·32	0·97	12	9	0	0	8
P. E. ISLAND—																						11	7	8	1	8	11	2	8	0	62				6·98	1·76	1·11	16	15	0	0	6
Charlottetown	46 14	63 10	38	30·06	30·67	29·20	1·47	21·2	+ 5·6	31	47·0		29	0·0	14	13·9						2	5	4	5	7	5	18	6	10	62				1·78	1·03	0·96	17	11	0	0	2
Hamilton	46 25	63 18						26·0	+ 8·7	12	49·0	24	27	1·0	15	13·3						0	3	0	2	5	12	8	1	0	31				2·09		0·35	10	21	0	0	0
NEWFOUNDLAND—																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 10	27																																					
*Cape Norman	51 38	55 52																																						
Point aux Basques	47 35	59 10	27	30·02	30·53	29·31	1·22	20·8	—	1	42·0		26	7·5	14	9·6						7	0	12	4	1	0	13	22	0	62				6·87		1·02	26	5	0	0	7
*Point Rich	50 12	57 25	35					29·3	+ 7·6	21	43·0		30	10·0	11							28	5	10	1	8	12	21	8	0	93				2·03	0·81	0·40	9	22	0	0	0
St. John's	47 30	52 42	125	29·16	30·53	29·10	1·43	30·1	+ 5·9	37	51·0		30	6·0	11	11·3				8	11	3	1	2	3	10	12	9	7	12	62				3·77	1·30	0·80	16	15	0	0	7
BERMUDA—																																								
Prospect	32 17	64 30	151	30·26	30·52	29·72	0·80	69·9	1·6	19	70·1		8	49·8	1	9·5						9	7	2	6	17	0	9	5	2	62				9·41	+3·92	3·88	11	17	0	0	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING JANUARY, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni	12·95	17	9	2·40	17	25·0	7	8·5	19	
Beaver Lake	5·86	11	20	2·36	17	2·0	1	2·0	18	
Coquitlam	13·84	12	18	2·09	30	2·1	2	1·8	8	
Denman's Island										
Ferguson	0·40	2	16	0·20	23-21	55·5	11	8·0	30	
Goldstream Lake	11·11	20	7	2·59	18	18·0	8	6·5	19	
Grand Forks	0·20	3	18	0·17	21	6·3	10	1·5	15	
Hornby Island										
Jordan River	11·49	22	9	2·35	30					
LittleQualicum(French Creek, V.I.)	5·11	8	23	1·20	27	0·0	0	0·0	0	
Naas Harbour	1·04	1	10	1·04	29	66·0	20	16·0	7	
Sooke	7·10	20	11	2·27	30	0·6	3	0·3	1-17	
Skidgate	7·13	16	11	1·13	29	7·0	2	4·0	19	
ALBERTA—										
Bardo						0·5	1	0·5	31	
Bismark						2·8	2	1·8	31	
Bruederheim										
Bittern Lake						5·0	5	2·0	18	
Conjuring Creek						2·3	4	1·0	31	
Dorenleo	R	0	29	R	21	2·0	2	1·0	19-22	
Grassy Lake	0·10	1	29	0·10	27	1·0	1	1·0	4	
Jumping Pound						4·8	2	2·8	31	
Josephsburg										
Kimball										
Lawrence						7·0	3	4·0	18	
Lacombe						7·0	3	5·0	31	
Langdon										
Macleod	R	0	28	R	23	4·5	3	3·0	31	
Mayton										
Okotoks						6·0	2	3·5	31	
Ponoka						3·6	5	2·0	22	
Sion						3·0	3	2·0	31	Aurora 1, 3, 23, 26, 27.
Wabamun										
SASKATCHEWAN—										
Elm How	0·03	2	28	0·02	25	0·5	1	0·5	15	
Hanley										
Last Mountain						8·0	—	—	—	
MANITOBA—										
Cartwright						7·0	5	4·0	31	
Deloraine						2·3	2	1·5	6	
Gretna						0·5	1	0·5	4	
Norquay						3·0	3	2·0	28	
Rapid City						1·2	3	0·7	24	
ONTARIO—										
Arden	0·40	3	25	0·35	7	6·0	4	3·0	27	Fog 12, 13, 16, 17, 28.
Deer Park	2·15	6	21	1·22	22	8·5	8	2·0	31	
Dutton	0·81	2	26	0·71	18	9·0	3	5·0	22	
Emsdale	0·80	1	18	0·80	19	27·8	13	4·0	4-6	
Ennismore	0·40	2	26	0·25	18	10·0	4	4·0	22	
Goderich	0·70	2	24	0·40	26	10·0	5	3·0	1	
Georgetown	0·76	5	15	0·51	18	26·2	14	8·8	22	
Lansdowne	1·75	1	30	1·75	19					
MacCue	0·95	2	25	0·70	21	5·0	4	2·0	5	
Montague	1·15	2	25	0·66	21	6·0	4	2·5	4	
Orangeville	0·67	1	20	0·67	18	26·9	10	6·1	5	
Princeton	0·18	2	25	0·15	19	22·0	4	9·0	23	
Sydenham	4·22	2	22	2·12	21	17·0	9	3.0	5-21	
Strathroy	1·70	2	20	1·40	18	31·0	9	12·0	22	
Walford	1·50	3	28	0·80	18					*Snow not measured.
Westport	1·46	2	23	1·25	21	9·1	6	3·5	27	
Wooler	2·05	4	21	1·13	21	10·0	6	2·0	—	
Westminster	1·95	2	26	1·82	18	11·0	3	5·0	24	
Wiarton	0·42	2	19	0·31	18	22.0	11	5·5	8	
Wesley	0·72	5	12	0·44	18	21·0	17	2·0	—	
NEW BRUNSWICK—										
Point Escuminac	2·33	4	23	1·12	30	12·7	4	5·2	7	Fog, 24, 25, 26, 27.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF JANUARY, 1910.

STATIONS.	Hours Ending																					
	1 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.				
Victoria					·01	·15	·18	·27	·31	·28	·22	·13	·07									
Nanaimo						·03	·11	·25	·25	·17	·12	·10	·03	·01								
Vancouver						·12	·21	·20	·20	·20	·23	·21	·18	·01								
Agassiz							·10	·24	·27	·29	·30	·21	·01									
Tranquille						·07	·19	·33	·45	·50	·48	·51	·39	·02								
Summerland					·01	·11	·33	·41	·38	·51	·41	·20	·01									
Kamloops						·05	·21	·40	·55	·52	·45	·31	T									
Edmonton						·08	·31	·36	·41	·18	·11	·31	·10									
Lethbridge					·01	·32	·42	·39	·55	·59	·62	·59	·55	·01								
Lacombe					·01	·20	·38	·41	·51	·58	·55	·55	·42	·05								
Medicine Hat					·17	·31	·47	·48	·45	·52	·50	·31	·01									
Fort Vermilion						·05	·09	·23	·28	·36	·39	·22	T									
Battleford					·01	·19	·51	·51	·60	·61	·62	·58	·18									
Indian Head						·08	·29	·36	·45	·42	·49	·37	·07									
Moose Jaw					·03	·25	·50	·57	·60	·55	·52	·51	·37	·02								
Brandon						·11	·41	·57	·59	·62	·62	·51	·40									
Winnipeg					·01	·06	·25	·45	·54	·57	·55	·40	·21	·02								
Haileybury						·15	·30	·38	·47	·51	·42	·30	·26	·03								
Gravenhurst																						
Woodstock						·03	·15	·41	·48	·28	·20	·20	·09	·01								
Lindsay						·04	·11	·48	·24	·25	·23	·18	·08	·01								
Barrie					·01	·09	·11	·20	·23	·24	·21	·15	·03									
Toronto						·09	·09	·15	·22	·22	·25	·18	·18	·09								
Kingston					·03	·15	·18	·21	·20	·17	·22	·22	·19	·02								
Ottawa					·02	·18	·23	·31	·43	·50	·46	·39	·36	·07								
Montreal					·01	·07	·18	·23	·30	·31	·32	·28	·08									
Quebec					·01	·07	·21	·31	·31	·36	·40	·39	·31	·05								
Sherbrooke					·02	·11	·20	·33	·35	·40	·39	·37	·32	·02								
Fredericton					·02	·17	·27	·36	·41	·42	·42	·41	·41	·07								
Charlottetown					·01	·17	·25	·28	·28	·25	·19	·23	·21	·05								
Truro					·02	·07	·17	·25	·27	·20	·21	·28	·21	·03								

—	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermillion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.	Truro.
Registered duration in hours.	50	33	46	15	91	74	77	77	117	116	101	50	119	79	122	120	96	90		39	43	40	46	49	89	55	78	78	92	59	52
Percentage of possible duration	19	12	17	17	31	28	29	31	44	46	38	23	47	29	45	45	36	32		14	15	14	14	14	31	21	28	28	32	21	19
Difference from average	−4	—	—	−2		—	—	—	—	—	—	—	+11	−1	—	+5	−7	—		−7	−11	5	−12	11	+1	10	—	—	−8	—	
Maximum percentage in one day	89	64	89	72	82	72	68	82	95	98	87	95	85	79	95	86	90	91		71	83	77	90	95	92	89	95	91	91	92	97
Date of maximum	2	1	1	1	20	28	20	11	8	9	15	6	18	29	29	20	3	1		4	19	1	15	15	15	30	15	31	20	20	8
No. of days completely clouded	15	18	11	16	5	7	8	12	5	3	8	16	1	8	3	5	10	12		20	19	15	16	21	8	13	12	10	12	19	20

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Sion, III.
3. Schreibar, IV ; Aweme, III; Sion, IV.
5. Fort Vermilion.
6. Waseca ; Fort Vermilion.
8. Aweme, IV.
9. Grenfell, Threehills Creek, III.
10. Esterhazy, III ; Spirit River.
12. Schreiber, IV ; Esterhazy, IV ; Waitefield, IV ; Emsburg, Foxleigh.
14. Kakabeka Falls, IV ; Haileybury, III.
17. Hillsdown, III ; Emsburg.
18. Schreiber, IV.
19. Schreiber, IV ; Minnedosa, III.
20. Minnedosa, III.
21. Schreiber, IV ; Esterhazy, III.
22. Esterhazy, IV ; Foxleigh, Minnedosa, III ; Fort Vermilion.
23. Schrieber, II ; Waitefield, III ; Sion, IV ; Gilt Edge, IV.
24. Kakabeka Falls, II.
25. Fort Vermilion.
26. Aweme, III ; Esterhazy, III ; Harmattan, IV ; Sion, IV.
27. Melfort, Waitefield, III ; Threehills Creek, II ; Sion, IV.
30. Waitefield, IV.
31. Spirit River.

Thunder recorded :

5. Madoc.
6. Madoc..

FORECASTS FOR JANUARY, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1237. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	83	63	15	5	81·9
Saskatchewan	80	61	13	3	88·1
Manitoba	81	68	9	1	89·5
Lake Superior	101	85	11	5	89·6
Lower Lake Region	115	95	12	8	87·8
Georgian Bay	113	82	19	12	81·0
Ottawa Valley	105	83	13		85·2
Upper St. Lawrence	101	87	9	8	88·0
Lower St. Lawrence	10	83	18	5	86·8
Gulf	107	85	17	5	87·4
Maritime Provinces West	121	95	21	5	87·2
Maritime Provinces East	121	90	25	6	84·7
Total	1237	989	182	75	86·6

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
March, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

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Monthly Weather Review.

VOL. XXXIV. FEBRUARY, 1910. No. 2.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

In British Columbia the mean temperature of the month was from 3° to 8° below average over the greater part of the province. The coldest period occurred between the 20th and 25th, when temperatures much below zero were recorded in the northern districts and on the higher levels elsewhere. The precipitation consisted of both rain and snow in the southern districts, and in the central and northern divisions was almost entirely, or wholly, snow. The total amount was in excess of average in the eastern extremity of Vancouver Island and along the west coast of the Mainland, was average in the vicinity of Kamloops and slightly above average in the Okanagan Valley Over the greater part of Vancouver Island the precipitation was largely in defect of average; as was also the case over the greater part of the Mainland, with the exception of the districts mentioned above.

In Alberta also, the mean temperature of the month was below average; in the western portion from 4° to 9° below average, in the eastern from 1° to 4°. The precipitation was largely in excess of average in the western portion, especially in the foothills of the Rockies, but further east the amount diminished to a slight deficiency in the eastern portion of the province. The first week of the month was very mild, but from the 9th to the end of the month colder weather prevailed, reaching its maximum intensity between the 20th and 24th, when minimum temperatures from 30° to 40° below zero were recorded.

In Southwestern Saskatchewan the mean temperature was from 1° to 3° below average, but in the remainder of the province it differed but little from average, in some cases exceeding it by less than half a degree. A few stations along the Qu'Appelle River reported an excesss over average precipitation, but elsewhere in the province the amount was slightly below average. As in Alberta, the month began with fine, mild weather, unusual for the season of the year; but great cold became general after the first ten days, the maximum intensity occurring about the 22nd, with minimum temperatures 30° to 40° below zero. At the end of the month a pronounced atmospheric depression was central over Alberta and Saskatchewan and the month ended with a severe blizzard over a great part of the province.

In Manitoba the mean temperature ranged from nearly average to 2° below. For Winnipeg and vicinity the total fall of snow, as reported for the month, was more than 50% above average. Elsewhere in the province, however, the total amount was less than average. The first few days of the month were quite mild, but about the 8th of the month an area of high pressure appeared over Manitoba, accompanied by a pronounced cold wave. From the 11th to 13th, during the transit of a shallow depression, temperatures moderated again, but from the 13th to the 27th very cold weather prevailed. At the end of the month the approach of a pronounced depression was preceded by a strong gale and a sudden rise in temperature.

In Ontario the mean temperature of the month was below the average over the greater part of the province. In Northwestern Ontario the negative departure ranged from 5° in the Rainy River District to nearly average in the Thunder Bay District, but increased again to nearly 2° below average in Algoma and 4° below in Northern Nipissing. In the Peninsula the mean temperature exceeded

the average locally in interior counties and along the southern shore of the Georgian Bay; was just average along the shores of Lake Ontario and slightly above average in the Ottawa Valley and Upper St. Lawrence. In the southwestern portion of the Peninsula, with the local exceptions noted, the average mean was not reached, the deviations varying irregularly from 0·5° to 6°. The amount of precipitation was largely in excess of average over the province from the Georgian Bay and Lake Huron to the Ottawa River, with local exceptions along the Lake Ontario shore. In the Rainy River District the snowfall did not exceed 3 inches, which is about half the usual amount for February. Stations in the Thunder Bay District, however, reported considerably more than usual, while in Algoma very little snow fell, less than half the usual amount. The coldest days were the 6th, 7th, 11th, 24th and 25th, when temperatures below zero were recorded throughout the province. The month ended with mild weather, and rain in some districts.

In Quebec the mean temperature was a little above average in the Upper St. Lawrence Valley, but along the Lower St. Lawrence and Gulf was either average or 0·5 of a degree below. In Northern Quebec above the Ottawa River, however, the weather of the month was cold, the mean temperature ranging from 1° to 6° below average. The amount of precipitation was everywhere above average, consisting mainly of snow, although light rain fell about the 21st, 22nd and 27th. The snowfall on the 17th was heavy in some places in Western Quebec.

In the Maritime Provinces the weather of February was very mild and cloudy. The mean temperature was from 1° to 4° above average and the amount of precipitation above the average in Nova Scotia and Prince Edward Island and on the Fundy shore of New Brunswick, but in Central New Brunswick was below average. Precipitation consisted of both snow and rain, the greater part of the rain occurring on the last two days of the month, when most of the snow on the ground disappeared. A cold wave of marked intensity was felt between the 24th and 26th, when temperatures below zero were general in New Brunswick and Prince Edward Island and Northern Nova Scotia. The last two days of the month were very mild, with rain.

In Newfoundland the mean temperature of February was from 1° to 3° above average and the total precipitation above average.

ATMOSPHERIC PRESSURE.

The mean value of the atmospheric pressure for February was above the average throughout Canada. The range of departure from normal was 0·17 of an inch, and the extremes of difference + 0·02 of an inch at Calgary, Alta., and + 0·19 of an inch at Dawson, Y. T., the average departure being about + 0·07 of an inch.

HIGH AREAS.

The majority of the high barometric pressure systems charted during February were first observed over the far Northwest Districts of Canada and, as a rule, passed southwestward to the Atlantic, the points of egress from the Continent being well scattered, although most of the systems crossed the Maritime Provinces or New England States.

Some systems were very pronounced and severe cold was experienced in all parts of the Dominion during their passage.

LOW AREAS.

Twelve areas of low pressure were charted for February. Three first appeared on the Alaskan coast, two on the British Columbian coast, one on the Oregon coast, one in the West Pacific States, four in the Southwestern States and one on the Atlantic Ocean to the northward of Bermuda. The general track of the areas was over or to the southward of the Lake Region, thence across the Maritime Provinces and Newfoundland. Several of the systems displayed considerable energy, but on the whole they were not markedly pronounced and lacked generally the great strength which characterized the areas during the early portion of the winter.

WINDS.

In British Columbia, in Vancouver Island and on the Mainland, the direction was variable with four days with strong, and seven with fresh breezes, and at least two gales.

In Alberta the direction was variable with two days with strong, and seven with fresh breezes.

In Saskatchewan the direction inclined to the north and west with two days with strong, and fifteen with fresh breezes, and one gale.

In Manitoba the direction was variable favouring slightly the westerly with six days with strong, and eight with fresh breezes and one gale.

In the Lake Region the northwest, west and southwest directions predominated with eleven days with strong, and twelve with fresh breezes, and three gales.

In the Ottawa and Upper St. Lawrence Valleys the direction was variable with seven days with strong and fifteen with fresh breezes, and one gale.

In the Lower St. Lawrence Valley and the Gulf the direction was variable with seven days with strong, and eleven with fresh breezes and four gales.

In the Maritime Provinces the north and west directions were most in evidence with five days with strong, and eleven with fresh breezes, and eight gales ; the latter, which were usually moderate, were experienced on the 1st, the 4th, the 7th, the 10th, the 12th, the 18th, the 21st and on the 27th.

In the Maritime Provinces, where in many places winter navigation is pursued, five of the eight gales were successfully warned. The remaining three, which were more or less local, were not warned.

TEMPERATURES.

THE MEAN TEMPERATURE OF FEBRUARY WAS BELOW AVERAGE,

	Degrees.
In British Columbia	3 to 8
Alberta	1 to 9
Saskatchewan	0 to 3
Manitoba	0 to 2
Ontario	0 to 5
Eastern Quebec	0 to 0.5
Northern Quebec	1 to 6

ABOVE AVERAGE,

	Degrees.
Locally in Saskatchewan	less than 1 degree
Locally in Ontario	less than 1 degree
In Western Quebec	less than 1 degree
In Maritime Provinces	1 to 4
In Newfoundland	1 to 3

The highest and lowest temperatures recorded in each Province during the month of February 1910, were :

British Columbia,	58° at Fairview on the 28th,	—36° at Atlin on the 23rd.
Alberta,	52° at Didsbury on the 5th, and at Harmattan on the 6th.	—48° at Islay on the 21st and at Lawrence on the 22nd.
Saskatchewan,	41° at East End on the 6th,	—51° at Jackfish on the 21st.
Manitoba,	40° at Brandon on the 28th,	—40° at Berens River on the 17th and 22nd.
Ontario,	60° at Woodstock on the 28th,	—45° at White River on the 10th.
Quebec,	43° at Sherbrooke on the 10th,	—37° at Abitibi on the 17th.
New Brunswick,	46° at Grand Manan on the 21st,	—26° at St. Stephen on the 25th.
Nova Scotia,	47° at Parrsboro' on the 26th,	—14° at Parrsboro' on the 24th.
P. E. Island,	43° at Hamilton on the 22nd,	—8° at Charlottetown on the 25th.

PRECIPITATION.

The amount of precipitation was below the average generally in British Columbia, in Saskatchewan, in Manitoba, locally in Ontario, in Central New Brunswick ; and above average, locally in British Columbia, in Alberta, locally in Manitoba, generally in Ontario and Quebec and the Maritime Provinces. Exceptions are given in the synopsis.

BRIGHT SUNSHINE.

The sun's disk was visible during February over British Columbia for an average for all stations of 84 hours ; in Alberta 137 hours ; in Saskatchewan 149 hours ; in Manitoba 156 hours ; in Ontario 110 hours ; in Quebec 100 hours ; in Maritime Provinces 98 hours. Except in parts of British Columbia, Quebec and the Maritime Provinces. these figures are greater than the mean of several preceding years.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Pressure. Highest.	Pressure. Lowest.	Pressure. Range.	Temperature. Mean.	Temperature. Difference from average.	Temperature. Years observed.	Temperature. Highest.	Temperature. Date.	Temperature. Lowest.	Temperature. Date.	Temperature. Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Velocity of wind. Highest day's velocity.	Velocity of wind. Date and direction from.	Precipitation. Amount.	Precipitation. Difference from average.	Precipitation. Heaviest fall in month.	Days with 1 or more	No. of fair days.	No. of auroras	No. of [illegible]	No. of fogs.
BRITISH COLUMBIA	°	°		in.	in.	in.	in.	°	°		°		°		°	°																								
Alberni (Beaver Creek)	49	15	124	49	300			31·0	− 3·9	11	55·0	7	1·0	21-22	11·9																			6·79	− 2·30	1·22	15	13	0	0	0
Agassiz	49	14	121	31	52			34·8	− 2·9	18	53·0	16	10·0	22-23	13·1																			5·51	− 0·6	1·11	15	13	0	0	0
Atlin	59	35	133	38	2240	30·12	30·79	29·20	1·59	3·1		1	31·5	1	36·0		23	16·0				5	5	1	10	3	3	7	0	1	0	23	50	2·2	10·0	26 S W	0·88		0·41	6	22	0	0	0
Barkerville	53	2	121	35	4180	29·98	30·50	29·03	1·47	12·1	− 7·1	20	33·0	4	5	25·0	21	13·1				7	9	0	0	0	0	0	7	0	2	17	56	1·3	20·0	27 S W	2·29	+ 0·39	0·69	11	17	0	0	0
Bella Coola	52	10	126	51	150			25·6	− 3·6	11	44·0	19	2·0	21	14·7																			3·17	− 0·68	1·7	10	18	0	0	0
Babine Lake								7·1	—	2	39·0	5	35·0	21	25·2																			1·05		0·58	7	21	0	0	0
Chilcotin (Big Creek)	51	10	123	0	3100			11·1	—	6	42·0	26	− 34·0	21	27·1																			1·81		0·59	8	20	0	0	0
Chilliwack	49	16	121	57	21																																					
Cranbrook	49	30	115	50				13·0	—	1	38·0	25	27	− 29·5	22	21·6																			1·20		1·05	5	23	1	0	0
Clayoquot	49	11	125	45	40			39·3	− 1·1	10	52·0	3	21·5	1 −	21	13·7																			7·63	− 5·20	1·73	11	11	0	0	0
Cowichan (Tzouhalem)	49	25	123	42	170			34·9		1	52·5	26	13·5		22	11·9																			3·33		0·65	12	16	0	0	0
Enderby	50	32	119	7	1180			23·1		6	45·0	27	− 19·0	21	18·0																			1·50		0·50	9	15	0	0	0
Fairview								25·4		1	58·0	28	− 4·0	21	15·9																			0·90		0·×	4	21	0	0	0
Fruitvale								19·3	—	1	43·5	27	− 20·0	22	21·7																			1·70		0·36	11	11	0	0	0
Glacier	51	14	117	29	4072			9·4		13	30·0	1 −	28	− 18·0	23	12·6																			6·30		1·50	11	17	0	0	0
Golden	51	16	116	55	2350			6·9	—	7	36·0		28	− 30·0	22	21·8																			3·68		0·85	7	21	0	0	0
Holberg								31·0	—	1	43·1	1	− 20·1	21-22	6·5																			9·98		2·31	22	6	0	0	0
Hedley	49	35	120	10				23·3		6	41·0	27	− 12·0	21	20·4																			0·84		0·20	8	20	0	0	0
Hedley (Nickel Plate)								11·9	—	7	35·0	6	− 26·	21	20·0																			3·34		0·57	15	13	0	0	0
Ikeda Bay	52	17	131	7	5			35·1		2	45·0	2 −	7	20·0	20	9·0																			13·97		3·90	25	3	0	0	0
Kamloops	50	11	120	29	1215	30·10	30·62	29·02	1·60	23·2	− 1·6	18	43·2	2	8·6	22	11	0		82	7	8	0	9	7	5	2	6	11	2	11	56	5·7	21·0	26 S E	0·87	+ 0·10	0·22	12	16	0	0	0
Ladner	49	5	123	1				35·1	− 2·0	11	48·0	25	10·0	21	11·8																			2·31	− 1·11	0·69	9	19	0	0	0
Massett, Q.C.I.	53	58	132	9	30			35·8	− 1·2	13	46·0	7	20·0	22	11·9																			1·25	+ 0·02	0·9	13	5	0	0	0
Midway	49	0	118	50	1880																																					
aNanaimo	49	10	123	37	125	29·91	30·47	29·22	1·25	31·5	− 3·4	11	49·4	26	11·5	22	10	9		91	7	6	0	25	0	30	3	5	2	0	19	84	4·1	16·0		2·15	2·05	0·59	11	17	0	0	1
Nicola Lake	50	9	120	30	2120			17·3		6	8·15	12·0	27	25·5	21	15·2																			1·49	− 0·68	0·30	11	7	0	0	0
North Nicomen	49	12	122	2	50			32·9		4	5·18	18·0	7	12·0	21	10·8																			6·92	− 1·48	0·98	15	13	0	1	0
New Westminster	49	13	122	54	330	30·07	30·96	29·16	1·30	33·3	− 1·8	23	49·3	1	11·5	22	11	5		86	7	11	0	5	11	3	2	7	2	2	21	56	3·7	20·0	27 S W	1·56	+ 1·82	0·85	16	12	0	0	3
Needles								20·9		1	40·0	15	8·0	22	13·7																			3·04		0·80	5	23	0	0	0
Nelson	49	29	117	21	1750			25·5		9	45·0	27	0·0	22	12·5																			1·73		0·80	7	21	0	0	0
Okanagan Mission (Kelowna)	49	52	119	29	1200			22·6	− 3·6	10	46·0	26	18·0	22	18·0																			0·95	− 0·12	0·29	8	20	0	0	0
Port Simpson	54	31	130	26	26	29·90	30·10	29·01	1·36	30·1	− 5·2	23	45·0	1	8·3	21	8	1		91	7	12	1	19	10	11	8	2	0	0	5	56	7·9	26·0		7·85	+ 0·39	1·85	15	13	0	0	0
Princeton	49	29	120	29	1650			13·8	− 9·9	13	40·0	26	− 26·0	21	26·3																			1·81	+ 0·81	0·40	9	19	0	0	0
Penticton	49	29	119	35				25·3		3	53·5	1	− 8·0	21	16·6																			0·31	—	0·15	8·2	0	0	0	0
Pemberton Hatchery								23·3		2	49·0	24	2·0	21	13·9																			2·88		0·80	7	21	0	0	0
Prince Rupert	54	18	130	18				32·8		1	46·1	6	6·8	21	12·1					86	7	15	12	21	11	3	2	3	2	1	1	56	10·7	60·0	1 E	6·72		1·53	13	15	0	0	0
Quesnelle	52	59	122	30	1700			13·7	− 5·7	13	45·0	27	− 24·0	2	23·3																			1·05	− 0·19	0·30	6	22	0	0	0
Revelstoke	51	0	118	6	1476			16·7	− 5·1	10	39·0	27	11·0	22	15·5																			1·22	− 0·01	1·10	11	17	0	0	0
Rossland	49	5	117	18	3100			20·5		6	37·0	1	5·0	22	11·1																			1·86		0·40	9·9	19	0	0	0
Ruskin (Stave Falls)	49	16	122	23	125			33·3		1	50·0	1	13·0	20	12·5																			7·21		1·27	15	13	0	0	0
Stuart's Lake (Fort St. James)	54	28	124	12	2280																																					
Salmon Arm	50	12	119	35	1215			23·1		9	46·0	27	11·0	22	11·1																			1·60		0·45	10	18	0	0	0
Steveston (Garry Point)	49	24	123	17				33·1	− 1·6	15	49·0	27	9·0	22	11·9																			3·62	− 1·27	0·65	12	16	0	0	0
Swanson Bay								28·8		2	40·0	1	7·0	21	9·3																			11·19		1·77	17	11	0	0	0
Salt Spring Island								31·2	—	1	48·0	9 −	26	18·0	22	11·1																			5·76		1·12	16	12	0	0	0
Summerland	49	57	119	0	1100			21·9		3	49·0	27	13·0	22	17·1																			1·60		0·24	4	24	0	0	0
Tobacco Plains (Elko)	49	1	115	5	2681			18·7	− 7·8	15	43·0	28	− 17·6	22	11·7																			2·55	+ 1·22	0·80	7	21	0	0	0
aTranquille	50	11	120	29		28·85	29·30	27·90	1·40	32·1		2	47·0	1	7·0	21	22	15·0		75	7	12	11	7	15	8	7	22	1	10	0	84				0·10		0·20	5	23	0	0	0
Vernon (Coldstream Ranch)	50	14	119	15	1575			21·0	− 5·8	17	46·0	27	12·0	22	11·3																			2·10	+ 0·91	0·40	9	19	0	0	0
Victoria	48	24	123	19	85	30·05	30·61	29·20	1·41	36·7	− 1·9	18	49·0	26	19·0	24	19	9		80	8	10	24	9	3	4	1	7	3	5	0	56	9·2	21·0	—	4·73	+ 1·13	1·36	20	8	0	0	0
Vancouver	49	17	123	5	150	30·08	30·68	29·16	1·52	24·6		9	47·6	24	13·2	22	20	7		83	7	11	0	0	12	18	4	9	6	2	5	56	3·9	15·0	27 S	5·01	—	0·95	16	12	0	0	0
Winter Harbour	50	32	128	3				35·9	− 2·3	11	47·0	9	29·0	15	9·8																			1·23	− 3·01	1·10	19	15	0	0	0
Wilmer								8·8	—	1	36·0	28	− 33·0	22	27·5																			0·75	—	0·30	1·24	0	0	0	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Pressure. Highest.	Pressure. Lowest.	Pressure. Range.	Temperature. Mean.	Temperature. Difference from average.	Temperature. Years observ'n	Temperature. Highest.	Temperature. Date.	Temperature. Lowest.	Temperature. Date.	Temperature. Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Velocity of wind. Highest day's velocity.	Velocity of wind. Date and direction from.	Precipitation. Amount.	Precipitation. Difference from average.	Precipitation. Years observ'n	Precipitation. Greatest in 24 hours.	Precipitation. Date.	Precipitation. Number of days.	Precipitation. Snow fallen.	Precipitation. Snow on ground.
				in.	in.	in.	in.																																
Manitoba—																																							
Almasippi	49	11	99 20					0·6		8	37·0	28	32 0	22	21·5																	0·01		0·01	1·5	0	0	0
aAweme (St. Alban's)	49	12	99 33	1180	28·85	29·17	27·97	1·20	0·9	+ 0·3	2·6	31 5	3	33 5	21	23·6																								
Brandon	49	51	99 57	1176					3·2	1 1	22	39 0	28	38 3	22	28·0			1	1	2	17	2	3	0	8	29	23	0	84	11	III		0·30	− 0·45	0	2·36	0	0	0
Birtle	50	25	101 1	1703																																				
Berens River	52	18	97 23	710					5·1		1	33·0	7	40 0	17	22	27	2																					
Carberry	49	52	99 20	1258						6											6	2	6	10	3	13	10	4	0	56				0·20		1·20	1·27	0	1	0
Carman	49	31	98 0	872																	4	1	2	3	3	9	11	9	11	56				0·2		0·20	1·27	1	1	0
Cypress River	49	33	99 3	1232																																				
Hillview	49	55	100 33	1100					1·3	3·7	21	37 0	28	33 0	22	20 8			2	2	1	6	12	0	3	16	11	31	0	84				0·70	0 1·00	2	2·36	0	1	0
Minnedosa	50	15	99 50	1620	30·17	30·58	29·15	1·15	1·1	3·7	26	35 8	7	39 3	21	21 7			1	1	1	1	2	1	0	5	15	27	0	56				0·30	0 0·27	2	7·21	1	0	0
Morden	49	11	98 6	978					1·5		6	38 0	28	28 0	21	23 1					0	0	0	1	0	3	5	10	0	39				0·70	1·05	3	8·20	0	0	0
Oakbank	49	57	96 12	740					3·0	0·1	13	35 5	28	36 5	23	19 3					5	0	1	0	2	5	7	8	0	28				0·70	0 0·21	0	1·21	0	0	0
Pipestone	49	31	100 58	1100																																				
Portage la Prairie	49	57	98 17	839					0·3	0·7	21	31 0	6	29 0	21	20 1																								
Portage la Prairie (2)	49	58	98 17																																					
Pierson	49	11	101 5	1531																																				
Stony Mountain	50	4	97 11	803					4·1	2·7	29	37 0	3	35 0	23	26 0					5	1	2	5	5	3	12	19	0	52	11	V	28th	0·15	0 7·2	0	10	2	8	0	0	0
Swan River	52	6	101 15	1112					0·6		2	39 0	3	37 0	20	21 6																								
Treherne	49	39	98 40	1212					0·6	1·1	15	35 0	28	33 0	21	19 0																								
Virden	49	51	100 55	1411																																				
Winnipeg	49	53	97 7	760	30·20	30·91	29·57	1·35	1·3	0·3	36	35 3	28	31 2	21	21 7					6	3	0	9	6	12	6	11	3	56				1·40	0 68	0	8·20	0	0	0
Ontario—																																							
Alton	43	51	80 5	1250					12·0	5·7	23	36 9	28	28·2	6	11	23	3			17	2	6	2	13	8	35	1	0	84	11	IV	23W	2·10	0 7·8	0	1·16	7	6	0
Aurora	43	57	79 21	886					15·8		2	11 3		21 2	21	20 1																								
Agincourt	43	17	79 16	560					17·7	+ 1·8	15	40 0	28	15·8	7	16 0					13	1	6	3	7	10	28	12	1	84				2·65	0 6·0	0	13·15	0	0	0
Barrie	44	23	79 41	839					15·6	+ 1·6	33	38 2	27	15·6	6	17 2			6	6	10	7	2	6	8	16	8	20	7	84	11	IV	23 NW	2·81	1 13·0	0	19·9	0	0	0
Beatrice	45	8	79 20	800					13·1	0·2	31	37 0	27	21 0	11	20 6			6	9	7	0	1	6	15	7	3	37	28	84				1·20	0 8·8	0	11·11	0	0	0
Bruce Mines	46	18	83 55	595					9·8	+ 0·2	12	37 0	11 28	25 0	21	25 9																								
Birnam	43	2	81 45	650					17·7	+ 1·8	27	10·1	15	15 0	21	11 6					17	4	2	1	10	7	6	9	0	56				1·10	0 92·1	0	11·17	0	0	0
Brantford	43	10	80 21	750					16·1	− 3·6	24	42 0	26	11 0	10	23	19	5																						
Bloomfield	43	50	77 21	290					16·8	1·3	12	38 0	16 28	16 0		6	15	7																						
Bancroft	45	1	77 50						11·6	1·0	19	42 0	28	35 0	10	21	28	2																						
Copper Cliff	46	29	80 59						8·2		3	31 0	26	33 0	11	25 5																								
Clinton	43	32	81 37						11·0		8	37 0	27	12 0	2	19 0					11	6	1	2	15	8	5	5	0	56				3·08		0	8·11	11	11	0
Coldwater	44	38	79 40						11·6	0·72	23	39 0	28	30 0	11	24 7																								
Cockburn Island	45	57	83 18	610					9·6	0·9	13	36 0	1	20 0	11	25 1																								
Cottam	42	7	82 45	606					20·1	3·3	22	41 0	15	5 0	28	17 9					21	2	8	9	7	1	5	6	0	59				3·58	1 12·1	0	13·15	0	0	0
Chatham	42	23	82 12	595					22·2	0·3	21	42 0	8 15	1 0	7	24	15	0																						
East Toronto	43	39	79 18						19·8			1·0	28	11 0		11	19	0																						
Elora	43	11	80 24	1271					15·1	2·7	13	37 0	27	20 0		11	17	8																						
Gravenhurst	44	54	79 20	770					12·6	− 0·5	39	38 0	27	33 0		11	22	6			6	1	11	5	5	11	11	7	1	84	11	IV	26th	1·13	+ 1·83	1	1·40	13	9	1
Guelph	43	33	80 16	1050					17·9	+ 0·9	22	40 0	16	11 0		7	16	9																						
Grimsby									20·9			1 11·0	27	10 0		7	16	5																						
Huntsville	45	19	79 8						10·8			1 38·0	11	30 0	10	22	2																							
Haileybury	47	29	79 39	687	30·11	30·62	29·62	1·00	7·7	1·1	15	38 8	27	27 0	17	23 3					4	1	2	1	8	6	3	15	13	56	1			1·01	0 1·0	0	6·31	12	16	1
Hamilton	43	16	79 51	303					20·6	3·3	35	42 0	16 27	7·0	6	7	13	3																						
Haliburton	45	3	78 28	1050					6·3	6·3	22	37 0	28	32 0	11	23 1																								
Kenora	49	18	94 32	1102					1·2	5·1	11	31 0	28	33 0	21	18 3																								
Kakabeka Falls	48	29	89 26	902					0·8		2	10 0	7	38 0	18	20 6																								
Kingston	44	13	76 29	285	30·13	30·69	29·63	1·06	17·6	+ 0·1	35	10 8	28	15·5	7	18·1			7	8	3	17	1	3	1	13	9	7	3	56				2·15	− 0·31	0	5·32	17	13	0
Knowlton	45	15	72 38	920					7·5	3·3	11	37 0	28	10 0	10	29 5																								

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observed	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of sunless.	No. of thunder storms.	No. of fogs.
New Brunswick																																								
Bathurst	47 39	65 42	15					15 1	+ 1·0	35	43·0	27																												
Chatham	47 3	65 29	21	30·01	30·79	29·39	1·40	15 1	+ 1·0	35	43·0	27	29·5	25	20 0					1	0	16	12	0	8	17	6	2	56				2 82	0 25	0 48	13	15	0	1	0
Dalhousie	48 4	66 22	39					12·7		33	43·0	28	20 0	18	25	19·7				0	0	7	1	0	0	12	1	0	28				1 50	1 67	1 50	7	21	0	1	0
Fredericton	45 57	66 36	161	30·07	30·81	29·28	1·56	16·7	+ 2·8	37	44·0	28	25·0	24	20·9		87	6	9	6	9	6	1	2	13	10	31	3	84	8·3	17 0		3 50	0 45	0 98	8	20	0	1	0
Grand Manan	44 47	66 46	19	30·01	30·90	29·19	1·71	25 9	+ 1·0	25	45·8	21	1·0	8	15·8				12	2	8	2	0	0	8	7	20	0	56				5 62	1 02	1 81	11	17	0	1	2
Moncton	46 9	64 45	50					18·7	+ 1·8	13	45·0	27	19·6	24	21·0					0	5	0	1	1	1	1	17							2 24	0 40	0 93	9	19	0	1	0
*Point Lepreaux	45 1	66 28	30					23·0	+ 1·2	32	50·0		2·0					6	11	11	13		5	0	6	11	18	2	0	72	11	V	11 S E	3 77	0 25	0 78	10	18	0	2	2
St. John	45 17	66 4	70	30·03	30·80	29·26	1·54	23·2	+ 3·5	37	47·0		15·3					6	9	12	5	8	1	6	2	8	18	2	0	56				1 90	0 53	0 76	11	11	0	2	1
St. Stephen	45 11	67 16	35					17·7	+ 0·7	13	45·0	28	26·0	25	12·9																			2 47	0 11	0 85	6	22	0	1	1
Sussex	45 38	65 38	69					19·3	+ 3·3	13	45·0	21 28	21·0	25	16·7					0	9	0	1	2	0	3	3	10	28				1 29	0 57	1 07	9	15	0	1	0
Nova Scotia—																																								
Halifax	44 39	63 36	88	30·02	30·78	29·35	1·43	25·7	+ 1·8	35	41·8	21	2·8	26	16·6					2 8	11	1	3	1	1	13	12	0	56				6 96	2 35	1 47	17	11	0	0	0
Port Hastings	45 39	61 32	45					25·4	+ 3·5	19	45·0	28	5·0	24	10·8						1	1	8	0	5	0	8	0	28				2 43	1 09	1 15	6	22	0	0	0
Parrsboro'	45 23	64 19	10					20·1	+ 0·4	14	47·0	26	14·0	24	12·1																										
Sydney	46 10	60 10	35	29·97	30·76	29·39	1·37	24·3	+ 2·9	36	45·0	10 21	8·1	25	16 3			7	12	5	10	3	0	1	6	10	16	5	56				5 70	+ 1 12	0 80	12	16	0	0	0
*Sable Island, E. Point	43 58	59 46	55					35 1	+ 5 1	23	47·0	1 27	21·0	11	23 —					0	15	0	11	4	31	0	23	0	84				3 39	1 26	1 50	4	21	0	0	6
Truro	45 22	63 18						21 5	+ 1·0	36	45·6	21	11·0	26	12 3			7	10	16	10	7	1	10	15	16	3	6	84				5 34	+ 1 19	0 84	15	13	0	0	0
Windsor	44 59	64 6	90					23·3		7	46·0	28	1·5	26	14·9																			1 99	—	0 90	5	13	0	0	0
*Whitehead	45 15	61 8	20					27·2	+ 4·0	27	49·0	21	11·0	26						13	9	7	3	1	18	15	15	0	81				1 92	0 37	0 95	9	19	0	0	2
Yarmouth	43 50	66 2	45	30·03	30·80	29·33	1·47	28 1	+ 2 3	29	45·0	28	6·1	26	13·0					9	5	7	2	1	8	10	11	0	56				3 76	0 79	1 03	17	11	0	1	1
P. E. Island—																																								
Charlottetown	46 11	63 10	38	30·01	30·71	29·31	1·40	21·3	+ 3·2	34	41·0	27	8·0	25	15·3					3	10	5	2	5	2	21	5	3	56				3 81	+ 0 62	0 70	10	18	0	0	0
Hamilton	46 25	63 18						21 3	+ 5·0	13	43·0	12	1·0	8	15·9					0	1	3	3	2	1	10	2	0	28				3 42	+ 0 41	0 69	10	18	0	0	0
Newfoundland—																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 10	27	29·91	30·71	29·21	1·50	26·7	—	2	30·0	13	0·0	19	18·2					5	7	2	0	2	0	21	16	0	56				2 87	—	1 90	23	5	0	0	0
*Cape Norman	51 38	55 52						9 6	—	25	21·0	4	14·0	20	—					10	25	4	3	0	3	1	32	0	81				1 95	—	0 70	16	13	3	0	0
*Point Rich	50 12	57 25	35					11 3	+ 1·0	25	39·0	21	6·0	19	—					18	1	24	3	6	8	8	13	0	81				3 00	0 35	0 60	8	12	0	0	0
Point aux Basques	47 35	59 10	37	29·93	30·72	29·27	1·45	32·2	—	2	36·5	28	7·5	19	11·0					8	3	11	1	1	1	11	11	0	56				6 11	—	0 81	24	3	0	0	1
St. John's	47 31	52 42	125	29·83	30·63	28·96	1·67	26·3	+ 3·0	37	53·0	2	2·0	25	11 2			6	9	5	7	1	3	2	14	5	14	5	56				7 61	2 55	1 28	20	8	0	0	0
Bermuda—																																								
Prospect	32 17	64 39	151	30·26	30·65	29·77	0 88	61 6	0 2	19	71 1	11 25	46·0	8	10·0					2	3	1	3	16	7	9	8	1	56				1 21	0 12	1 64	18	19	0	2	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING FEBRUARY, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days ·01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
British Columbia—	in.			in.		in.		in.		
Alberni	4·48	8	18	1·27	26	16·0	4	7·0	23	
Beavor Lake	5·11	10	16	1·25	27	8·0	4	2·5	15-20	
Coquitlam	5·71	6	19	1·65	26	16·0	3	8·0	17	
Denman's Island										
Ferguson						73·0	9	17·0	24	
Goldstream Lake	8·05	15	9	2·85	27	21·5	6	5·0	23	
Grand Forks	0·01	1	17	0·01	21	11·0	11	3·6	25	
Hornby Island										
Jordan River	6·55	17	11	1·63	27	5·5	2	4·0	23	
LittleQualicum(French Creek, V.I.)	2·59	5	20	1·06	27	11·0	3	3·0	23	
Naas Harbour										
Skidgate	5·33	11	16	2·00	2	4·0	2	3·0	28	
Sooke	4·50	11	16	1·00	27	10·8	5	5·0	20	
Alberta—										
Bardo						2·0	1	2·0	24	
Bismark						5·0	3	2·3	28	
Bruederheim						6·0	2	4·0	25	
Bittern Lake						2·2	4	1·0	21	
Conjuring Creek										
Dorenlee						4·0	5	2·0	28	
Grassy Lake						6·2	3	2·3	14	
Jumping Pound						8·0	5	4·8	14	
Josephsburg										
Kimball										
Lawrence										
Lacombe						1·5	1	1·5	15	
Langdon						9·0	2	8·0	15	
Macleod						7·2	7	2·0	15-16	
Mayton										
Okotoks						7·5	5	3·0	13	
Ponoka						6·0	2	3·0	14-28	
Sion	r	0	21	r	27	9·7	7	5·8	27	Aurora 2, 3, 8, 9, 10, 12, 28.
Saskatchewan—										
Elm How						5·5	7	3·0	1	
Hanley										
Last Mountain										
Manitoba—										
Cartwright						5·5	6	2·0	24	
Deloraine						3·5	3	2·0	17	
Gretna						7·0	3	4·5	25	
Norquay						3·3	4	2·0	8	
Rapid City						4·8	4	3·8	25	Aurora 3.
Ontario—										
Arden	0·82	3	20	0·61	27	10·0	5	3·0	3-12	
Deer Park	0·67	2	20	0·46	28	19·5	6	11·0	3	
Dutton	0·00	0	21	—	—	10·0	4	3·0	9-17	
Emsdale	0·00	0	12	—	—	26·0	16	8·0	27	
Ennismore										
Goderich	0·50	2	19	0·30	26	18·0	7	6·0	3	
Georgetown	1·09	5	14	0·49	27	21·8	13	10·5	3	
Lansdowne										
MacCue	0·20	1	23	0·20	28	13·0	4	6·0	17	
Montague	0·21	2	19	0·14	27	20·5	7	6·0	17	
Orangeville	0·91	1	17	0·91	27	23·8	10	11·7	3	
Princeton	0·14	1	19	0·14	27	33·5	8	10·0	3-13	
Sydenham										
Strathroy	1·35	4	15	0·86	26	22·3	9	5·5	3	
Watford	1·15	3	25	0·75	27	Snow not measured.				
Westport	0·75	1	22	0·75	27	20·8	5	10·3	12	
Wooler	0·89	2	22	0·47	28	16·0	4	6·0	3-12	
Westminster	1·13	1	22	1·13	28	20·5	5	6·0	3	
Wiarton	1·19	1	18	1·19	26	12.5	9	2.0	2-19	
Wesley	1·00	1	13	1·00	27	27·5	15	7·0	3	
New Brunswick—										
Point Escuminac	0·45	2	21	0·41	28	20·6	5	6·0	22	

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF FEBRUARY, 1910.

STATIONS.	Hours Ending																	
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria								·08	·19	·28	·26	·53	·38	·31	·29	·11	·01				
Nanaimo								·11	·21	·27	·31	·38	·35	·39	·42	·31	·08				
Vancouver								·01	·08	·28	·37	·39	·43	·39	·39	·36	·37	·19			
Agassiz								·01	·18	·32	·12	·12	·37	·33	·28	·12	·03				
Tranquille								·12	·28	·36	·43	·44	·39	·40	·31	·27	·11				
Summerland								·24	·11	·17	·45	·11	·47	·55	·54	·16	·02				
Kamloops								·01	·23	·53	·10	·36	·41	·51	·45	·24	·02				
Edmonton								·06	·47	·60	·75	·75	·76	·76	·69	·53	·12				
Lethbridge								·16	·30	·42	·19	·18	·15	·15	·61	·19	·28	·01			
Lacombe								·19	·52	·66	·66	·71	·71	·62	·53	·24					
Medicine Hat							·01	·27	·52	·65	·61	·56	·57	·57	·48	·19					
Fort Vermilion																					
Battleford								·10	·52	·81	·87	·81	·87	·88	·84	·64	·18				
Indian Head								·01	·28	·46	·50	·61	·51	·53	·53	·47	·11				
Moose Jaw								·11	·41	·59	·54	·65	·69	·70	·67	·62	·37				
Brandon							·02	·19	·46	·60	·61	·65	·61	·63	·58	·52	·23				
Winnipeg								·14	·58	·68	·71	·74	·75	·71	·72	·59	·38				
Haileybury							·01	·23	·43	·53	·61	·59	·55	·53	·51	·53	·21	·01			
Gravenhurst																					
Woodstock								·05	·19	·53	·39	·45	·48	·45	·51	·44	·16				
Lindsay																					
Barrie								·08	·25	·37	·43	·39	·34	·35	·35	·39	·06				
Toronto								·04	·28	·36	·41	·49	·46	·52	·53	·51	·18	·11			
Kingston							T	·19	·35	·41	·48	·47	·43	·39	·36	·38	·26	·01			
Ottawa						T	·21	·43	·48	·52	·50	·59	·56	·45	·41	·23					
Montreal								·05	·19	·35	·40	·46	·41	·39	·31	·11	·01				
Quebec							·09	·24	·37	·47	·56	·57	·51	·51	·51	·21					
Sherbrooke							·02	·20	·30	·34	·48	·55	·44	·37	·35	·29	·13	·02			
Fredericton							·23	·36	·46	·42	·46	·45	·50	·48	·41	·53	·02				
Charlottetown								·17	·28	·43	·45	·46	·47	·45	·42	·37	·23	·02			
Truro								·05	·27	·28	·31	·35	·32	·29	·23	·22	·20	·04	·01		

—	Victoria.	Nanaimo.	Vancouver.	Agassiz.	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetwn.	Truro.
Registered duration in hours	64	82	92	69	87	104	84	151	116	155	125		181	113	150	114	168	133		96		84	120	105	124	75	113	97	115	105	72
Percentage of possible duration	23	29	32	21	11	37	30	56	41	56	11		67	10	53	51	60	46		33		29	41	36	43	31	39	33	38	36	25
Difference from average	—1	+3	—	+2	—	—	—	—	—	—	—	—	+19	+5		+4	+11			+3		+1	+5	0	+9	−10	+3		−3		
Maximum percentage in one day	73	82	92	79	87	87	80	88	95	90	88		88	85	93	92	92	91		90		84	90	93	91	88	90	97	96	96	93
Date of maximum	1	7	21	7	7	21	21	20	5 (9)	7	19		20	22	8	23	13	6		6		6	19	18	25	24	11	25	2	24	21
No. of days completely clouded	10	9	9	15	8	3	8	6	5	3	9		0	6	3	5	5	3		9		6	6	12	5	10	8	8	10	11	11

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Emsburg, Waseca, Grenfell, III ; Foxleigh, Schreiber, IV ; Kakabeka Falls, IV.

2. Minnedosa, II ; Sion, II ; Waitefield, III ; Gilt Edge, IV ; Threehills Creek, I ; Emsburg, Hillsdown, IV ; Esterhazy, III ; Foxleigh, Schreiber, IV ; Fort Vermilion, II.

3. Minnedosa, IV ; Haileybury, IV ; Sion, III ; Rapid City, Waitefield, IV ; Gilt Edge, III ; Esterhazy, III ; Foxleigh, Kakabeka Falls, IV.

4. Waitefield, II ; Esterhazy, II ; Foxleigh, Schreiber, IV.

5. Dawson, IV.

6. Gilt Edge, IV ; Esterhazy, II.

7. Gilt Edge, IV ; Esterhazy, III ; Waseca, Fort Vermilion, I.

8. Sion, III.

9. Minnedosa, IV ; Sion, IV ; Waitefield, IV ; Gilt Edge, III ; Peace River Crossing, IV.

10. Sion, IV ; Carberry.

11. Waitefield, IV ; Emsburg, Waseca, Schreiber, IV ; Fort Vermilion, III.

12. Minnedosa, IV ; Dawson, IV ; Sion, II ; Waitefield, III ; Esterhazy, I ; Crescent Lake, IV; Fort Vermilion, I.

13. Waitefield, III ; Esterhazy, IV; Fort Vermilion, I.

14. Waitefield, IV ; Esterhazy, II ; Meota, III.

15. Waitefield, IV ; Peace River Crossing, IV ; Pakan, IV.

16. Dawson, I.

17. Ottawa, II ; Dawson, II ; Waseca.

21. Pakan, I.

22. Pakan, I ; Fort Vermilion, III.

23. Pakan, I.

25. Waseca.

26. Glaslyn.

27. Waitefield, IV ; Peace River Crossing, IV ; Esterhazy, II ; Grenfell, III ; Crescent Lake, IV ; Glaslyn, Kenora, II ; Fort Vermilion, I.

28. Gravenhurst, IV ; Dawson, IV ; Sion, II ; Waitefield, III ; Threehills Creek, II ; Emsburg, Hillsdown, IV ; Esterhazy, III ; Waseca, Lake Talon ; Fort Vermilion, II.

Thunder recorded :

10. Yarmouth.

24. North Nicomen.

FORECASTS FOR FEBRUARY, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1109. These were divided as follows :

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	74	62	8	1	89·2
Saskatchewan	76	64	11	1	91·4
Manitoba	76	64	7	5	88·8
Lake Superior	86	66	11	6	81·9
Lower Lake Region	90	81	16	2	89·9
Georgian Bay	99	71	22	3	85·9
Ottawa Valley	95	69	23	3	84·7
Upper St. Lawrence	91	71	21	2	86·7
Lower St. Lawrence	96	69	20	7	82·3
Gulf	96	70	16	10	81·2
Maritime Provinces West	109	75	26	8	80·7
Maritime Provinces East	109	77	23	9	81·2
Total	1109	812	267	60	85·3

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
April, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. MARCH, 1910. No. 3.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

The month of March, 1910, was remarkable for the high temperatures recorded. In the Western Provinces, with the exception of March, 1878, the mean temperature of March, 1910, was the highest on record for the corresponding month in any year. In Ontario, east of Lake Huron, this was the warmest March on record except March, 1903, when the mean temperature for most of the stations was slightly higher. In the other provinces the differences from normal were not so marked.

In British Columbia, stations on Vancouver Island and along the coast line, reported mean temperatures from 1° to 2·5° above normal, but at stations in the interior, the normal was exceeded by from 6° to 11°. In most districts there was no severe frost during the month, and although the spring appeared backward on the coast it was very well advanced in the interior by the close of the month. Maximum temperatures ranging from 60° to 70° were registered in the interior about the 13th to 15th, and 19th to 21st. Precipitation was below average in the southern portions of Vancouver Island and along the coast of the southern mainland, but in the interior and northern portions of the province was either normal or above. In some of the northern districts the fall was exceptionally heavy.

In the Western Provinces, the remarkably high mean temperatures of March ranged from 12° above the normal on the eastern slope of the Rockies to 24° above average at Moose Jaw in Saskatchewan, and decreased thence in an easterly direction to Winnipeg where the mean was 19° in excess of normal. Not since the year 1878 has such a warm March been experienced in the west. The month began with cold temperatures below zero in many districts, but dry southerly winds set in early in the first week and warm conditions prevailed for the remainder of the month. The extreme maximum of the month occurred generally about the 21st or 22nd when temperatures of 75° or over were registered at the majority of the stations. In western Alberta the total precipitation was normal or slightly in excess, as was also the case in eastern Manitoba; elsewhere in the three provinces the total amount was in defect of normal. Ploughing and seeding was commenced at many places during the last week of March.

In the Lake Superior districts of Ontario the normal mean temperature was exceeded by from 11° to over 14°; while in the western Rainy River district the normal was exceeded by about 8°. In the districts north of Lake Huron and about the Georgian Bay the excess over normal ranged from 5° to over 10°. In the Ottawa and Upper St. Lawrence Valleys the excess was about 7°, and over the peninsula was from 7° to 11°. There were sharp frosts from the 9th to the 11th and from the 15th to 18th, but the month was for the most part exceptionally mild. Maximum temperatures exceeded 70° at most stations, and at a few points in Southern Ontario 80° was reached or exceeded on the 22nd or 23rd. Thunderstorms occurred on the 6th and 19th, and light snow about the 7th and 13th. A fall of snow of two inches at Kenora in the Rainy River District brought the total for the month a little above normal for that station, but elsewhere was much less than the average of the preceding twenty years. The extreme maximum temperature of the month established a record at most places in Ontario for the month of March, but the average of the month although exceptionally high was very slightly exceeded in Ontario in March, 1903. By the close of the month most of the lake harbours were free of ice and navigation had opened at several ports. Farmers began ploughing at many points towards the end of the month. Frogs were heard piping on the 20th; robins were seen about the 13th; blackbirds and geese about the end of the first week.

In that part of Quebec lying near the confluence of the Ottawa and St. Lawrence Rivers and between the St. Lawrence and the Vermont and New Hampshire boundary, the mean temperature of March exceeded the normal by about 8°. But along the Lower St. Lawrence the excess did not exceed 4° and in the Gulf counties was not more than 2°. In the northern portion of Pontiac the normal was exceeded by less than 3°. From the 10th to the 12th and from the 17th to the 19th temperatures below zero were registered in Western Quebec and lower than 10° above zero in the Gulf counties. Maximum temperatures from 50° to 60° or over were registered during the last week. Snow or rain fell on from six to fourteen days, but the amount was not heavy, the total for the month being less than the average of the preceding twenty years.

In the Maritime Provinces the month of March was very mild and, except in parts of Nova Scotia, abnormally dry. The normal mean temperature was exceeded by from 2° to 5°, the excess at the greater number of stations reaching 4°. From the 6th to 11th and from the 17th to 19th low temperatures were registered, but the remainder of the month was very mild, maximum temperatures exceeding 50° at many stations on several days in the last two weeks of the month. The precipitation was much less than the average of the preceding twenty years, except in parts of Nova Scotia and Prince Edward Island where the excess was very small.

In Newfoundland the mean temperature was about 2° above average and the precipitation about one-half of the normal quantity.

ATMOSPHERIC PRESSURE.

The mean value of the atmospheric pressure for March was below the normal from Northern and Central British Columbia to Eastern Quebec: elsewhere in Canada the average was exceeded.

Negative departures over the Western Provinces were pronounced, ranging from —0·08 of an inch at Calgary to —0·19 of an inch at Battleford.

Postive departures were large over the Southern Mainland of British Columbia and throughout the Maritime Provinces, amounting to +0·10 of an inch in the former district and generally exceeding that amount in the latter region.

The range of departure from normal was 0·37 of an inch, the extremes being —0·23 of an inch at Dawson, Y.T., and +0·14 of an inch at Yarmouth, N.S.

HIGH AREAS.

Eleven areas of high pressure were charted during the month. Two first appeared in the far northwestern portion of the continent; six on the Middle Pacific coast, two north of Manitoba, and one to the northward of the Lower Lake Region. The general course of the areas was either over or to the southward of the Lake Region. The systems were in nearly all instances very feeble and chiefly noticeable for the absence of the cold weather by which they are usually attended.

LOW AREAS.

Fourteen areas of low pressure were charted during the month, four first appeared on the southern Alaskan coast, one in British Columbia, three to the northward of the Western Provinces, two in the Middle Pacific States, one in the Gulf of Mexico and three off the United States Atlantic seaboard north of the 35th parallel of latitude. The areas were usually of little energy and the continental systems passed far to the northward; in nearly all instances well to the northward of the Lake Region

WINDS.

In British Columbia on Vancouver Island and over the Mainland the direction was variable with six days with strong and six with fresh breezes and one gale.

In Alberta the northwest, west and southwest directions were mostly in evidence with seven days with strong and nine with fresh breezes.

In Saskatchewan the south and west directions were the most general, with three days with strong and fifteen with fresh breezes and one gale.

In Manitoba the direction favoured the westerly and northerly with thirteen days with strong and six with fresh breezes and three gales.

In the Lake Region the south and west directions predominated with seven days with strong and seven with fresh breezes and two gales.

In the Ottawa and Upper St. Lawrence Valleys the winds were chiefly southerly to westerly with eight days with strong and eight with fresh breezes and two gales.

In the Lower St. Lawrence Valley and the Gulf the direction was mainly northwesterly to southwesterly with nine days with strong and fourteen with fresh breezes and three gales.

In the Maritime Provinces the direction was variable with thirteen days with strong and seven with fresh breezes and four gales, the latter occurring on the 7th, the 13th, between the 19th and 20th and on the 22nd.

In the Maritime Provinces where the display of storm signals is continued during the winter months, warnings were issued for all of the storms which were experienced, except for the local gale which occurred on the 22nd.

TEMPERATURE.

In British Columbia the mean temperature of March exceeded the normal by 1° to 3° on Vancouver Island and on the coast, but by 6° to 11° in the interior ; in the Western Provinces by 12° to 24° ; in Ontario by 7° to 14° ; in Quebec by 2° to 8° ; in the Maritime Provinces by 2° to 5° ; and in Newfoundland by about 2°.

The highest and lowest temperatures recorded in each Province during the month of February 1910, were :

British Columbia,	73° at Alberni on the 13th,	—25° at Atlin on the 5th and 6th.
Alberta,	76° at Medicine Hat on the 20th.	—32° at Calgary on the 12th.
Saskatchewan,	85° at Muenster on the 28th.	—28° at Glaslyn on the 1st.
Manitoba,	83° at Morden on the 23rd,	—16° at Swan River on the 1st.
Ontario,	81° at Alton on the 31st,	—30° at White River on the 17th.
Quebec,	69° at Ste. Anne de Bellevue on the 28th,	—33° at Abitibi on the 17th.
New Brunswick,	72° at St. Stephen on the 25th,	0° at Dalhousie on the 6th and at Fredericton on the 11th.
Nova Scotia,	59° at Halifax on the 25th,	5° at Truro on the 19th.
P. E. Island,	47° at Hamilton on the 21st,	13° at Hamilton on the 6th.

PRECIPITATION.

On lower Vancouver Island and along the coast line of the lower mainland the precipitation was below normal in British Columbia, but in the interior was average or above. In Western Alberta and eastern Manitoba the amount was in excess of normal but elsewhere in the Western Provinces was deficient. Except locally in the Rainy River district the amount in Ontario was also much below average. In Quebec and New Brunswick the precipitation was very light, but in some parts of Nova Scotia and Prince Edward Island was above the normal.

SNOW ON THE GROUND.

At the close of the month the ground was bare of snow except in Quebec and northern New Brunswick, where there was a depth of from 2 to 20 inches.

BRIGHT SUNSHINE.

The amount of bright sunshine registered in Canada during the month of March, 1910, was a little below average on Vancouver Island and the coast of British Columbia, but above average in the interior and generally throughout the Western Provinces and Ontario. In the Maritime Provinces there was apparently a slight deficiency.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MARCH, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean	Difference from average.	Years observed	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in 6 hours.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
BRITISH COLUMBIA				in.	in.	in.	in.																																	
Alberni (Beaver Creek)	49	15	124	49	300																												5·12	−0·71	0·79	15	16	1	0	0
Agassiz	49	14	121	31	52																												3·36	+0·13	0·86	11	17	0	0	0
Atlin	59	35	133	38	2200	29·82	30·21	29·28	0·93	21·0			3	49·5	15	25·5	5	6	11	2												1·30		0·50	13	18	1	0	0
Barkerville	53	2	121	35	1180	29·88	30·31	29·13	1·18	32·0	+ 6·4	20	51·0	19	10·0	6	16·1		7	6	0	0	1	3	0	15	3	0	40	62	1·1	10·0	1 S.W.	1·39	−0·77	0·40	7	24	0	0	0
Bella Coola	52	40	126	51	150					37·8	+ 1·1	12	62·0	21	25·0	15	11·7																8·01	−3·58	1·75	19	12	0	0	0
Babine Lake										32·8	—	2	50·0	16	5·0	4	21·4																1·17		0·35	11	2	0	0	1
Chilcotin (Big Creek)	51	10	123	0	3100					33·8	—	7	56·0	10	21	−1·0	7	25·5															0·19		0·1	2	1	0	0	0
Cranbrook	49	30	115	50						40·1	—	1	63·0	6	21	11·5	6	20·2															0·67		0·32	5	24	0	0	0
Chayoquot	49	11	125	47	10					43·6	+ 1·5	10	63·0	17	30·0	23	12·2																7·91		3·23	17	11	0	0	2
Cowichan (Tzouhalem)	48	25	123	42	170					45·6	—	1	63·2	12	29·5	6	25·15·6																2·16		1·09	11	19	0	0	0
Enderby	50	32	119	7	1180					42·5	—	8	64·0	16	22	21·0	13	15	21·7														1·77		0·70			0	0	0
Fairview										46·1	—	1	63·0		22	30·0	5	28	18·6														0·10		0·06	2	28	0	0	0
Fruitvale										39·9	—	1	61·0		21	18·0		6	23·0														1·94		0·67	8	3	0	0	0
Glacier	51	11	117	29	4072					31·6	+ 6·2	12	45·0	20	22	15·0	7	10·2															8·65	+6·29	2·20	15	16	0	0	0
Golden	51	16	116	55	2350					35·2	—	7	54·0	19	11·0	6	9	19·7															1·88		0·60	7	23	0	0	0
Holberg										39·7	—	1	53·0	16	30·0	11	8·4																15·11		2·23	20	5	0	0	0
Hedley	49	35	120	10						41·4	—	5	63·0	17	22·0	5	21·9																0·11		0·21	2	29	0	0	0
Hedley (Nickel Plate)										28·8	—	5	55·0	11	6·0	7	16·4																0·70		0·25	4	27	0	0	0
Hope										42·0	—	1	67·5	15	21·5	16	18·3																5·67		1·33	18	13	0	0	0
Ikeda Bay	52	17	131	7	5					41·6	—	2	68·0	21	27·0	2	6	14·1															11·98		2·39	21	7	0	0	0
Kamloops	50	11	120	29	1215	29·95	30·18	29·39	1·09	46·5	+ 9·7	16	70·0	18	27·5	9	21·2		71	6	4	2	11	9	11	3	4	1	1	11	62	7·2	18·0	30 S.W.	0·18	0·21	0·07	6	25	0	0	0
Kitamaat	53	59	128	12						40·1	—	4	56·0	18	25·0	2	18·1			5	2	3	11	0	6	0	1	0	31				8·81		1·46	19	12	0	0	0
Ladner	49	5	123	4						45·8	+ 4·4	10	62·0	15	30·0	4-24	17	4															2·15		0·30	12	19	0	0	0
Massett, Q.C.I	53	58	132	9	30																																			
Midway	49	0	118	50	1800																																			
aNanaimo	49	10	123	37	125	29·91	30·14	29·40	0·98	44·1	+ 2·4	12	68·0	15	27·0	25	14·4		85	7	6	1	5	3	29	2	1	10	11	28	93	4·7	25·0	20 W	1·04		0·37	12	19	0	0	2
Nicola Lake	50	0	120	39	2120					40·4	+ 8·3	15	63·0	13	21·0	6	18·8																1·10	−0·12	0·93	5	26	0	0	0
North Nicomen	49	12	122	2	50					46·2	+ 3·8	18	70·0	13	29·0	25	18·5																7·55	+1·28	1·66	17	11	0	0	0
New Westminster	49	13	122	54	330	30·06	30·50	29·61	0·86	41·8	+ 2·3	16	65·0	13	29·5	25	15·7		83	7	12	0	5	11	1	5	12	3	1	21	62	3·3	12·0	2 SW	3·79	−2·32	0·58	18	13	0	0	1
Needles																																								
Nelson	49	29	117	21	1709					41·7	—	7	63·0	15	25·0	6	17·3																1·18		0·35	6	25	0	0	0
Okanagan Mission (Kelowna)	49	52	119	29	1200					43·4	+ 6·8	11	69·0	12	23·0	9	20·0																0·39	−0·51	0·18	6	25	0	0	0
Port Simpson	54	34	130	26	26	29·82	30·51	28·93	1·61	38·8	+ 0·8	20	51·0	12	26·5	4	9·8		95	8	16	1	6	8	11	16	1	2	3	8	62	7·9	26·0	2 SW	11·12	+5·56	1·83	22	9	0	1	2
Princeton	49	29	120	29	1650					36·9	+ 1·5	15	58·0	21	27	10·0	6	25·8															0·67		0·10	7	21	0	0	2
Penticton										43·3	—	1	66·5	12	19·5	28	21·6																0·12		0·08	3	28	0	0	0
Pemberton Hatchery										39·7	—	2	56·0	15	26·0	11	15	16·8															1·81		0·39	10	21	0	0	0
Prince Rupert	54	18	130	18																																			
Quesnelle	52	59	122	30	1700					36·5	+ 5·9	11	63·0	22	7·0	3	27·3																0·51	+0·07	0·24	6	25	0	0	0
Revelstoke	51	0	118	6	1476					38·6	+ 5·1	10	54·0	14	15	23·0	16	17·0															1·13		1·03	14	17	0	0	0
Rossland	49	5	117	18	3100					38·3	—	7	54·0	21	19·5	6	12·6																2·12		0·62	9	22	0	0	0
Ruskin (Stave Falls)	49	16	122	23	125					42·6	—	1	67·0	13	29·0	21	17·7																6·30		1·36	21	7	0	0	5
Stuart's Lake (Fort St. James)	54	28	124	12	2280								17																											
Salmon Arm	50	12	119	35	1215					42·7	—	8	62·0	12	27·0	19	9																0·30		0·20	7	24	1	0	5
Steveston (Garry Point)	49	21	123	17						43·1	+ 2·1	15	57·5	28	31·0	6	13·0																2·08	−0·71	0·39	11	17	0	0	0
Swanson Bay										37·5	—	2	46·0	15	30·0	22	23	7·3															21·20		3·56	25	6	0	0	0
Salt Spring Island	48	50	123	20						43·9	—	1	58·5	12	29·0	25	13·6																2·07		0·42	17	14	0	0	2
Summerland	49	57	119	0	1100					43·6	—	3	62·0	12	27·0	19	18·1																0·11		0·11	1	30	1	0	0
Tobacco Plains (Elko)	49	1	115	5	2681					42·3	+ 8·2	15	63·0	22	21·0	6	17·6																0·51	−0·08	0·31	5	26	0	0	1
aTranquille	50	11	120	29		28·71	29·17	28·19	0·98	45·1	—	2	68·0	11	26·0	9	23·1		65	5	2	3	12	11	14	2	20	15	12	1	93				0·28		0·20	3	28	0	0	1
Vernon (Coldstream Ranch)	50	14	119	15	1575					43·1	+ 8·0	15	62·0	15	22	26·0	29	17·6															0·80	+0·46	0·25	7	24	0	0	0
Victoria	48	24	123	19	85	30·05	30·46	29·61	0·85	46·1	+ 1·9	18	61·1	13	31·1	25	12·6		79	7	6	17	2	7	1	10	18	3	1	0	62	8·1	28·0		2·37	−0·31	0·92	16	15	0	0	0
Vancouver	49	17	123	5	136	30·06	30·52	29·65	0·87	44·5			65·8	15	30·1	25	12·5		78	7	9	0	1	8	20	3	9	4	7	10	62	3·8	15·0	28 S.W.	2·91		0·52	18	13	1	0	1
Winter Harbour	50	32	128	3						42·1	+ 2·7	15	58·0	21	30·0	27	11·5																10·66	+1·76	2·60	17	14	0	0	0
Wilmer										37·0	—	1	63·0	21	6·0	29	23·9																0·05		0·05	1	30	0	0	1

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MARCH, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure.				Temperature.								Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from									Velocity of wind.			Precipitation.						
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.
	°	'		in.	in.	in.	in.																														
MANITOBA—																																				
Almasippi	49	11	99	20				26·1			8	47·0			1·0	1	24·5																1·03		0·71	3	28	1	0	1
aAweme (St. Alban's)	49	12	99	33	1180	28·67	29·16	28·04	1·12	35·9	+20·0	23	80·0			0·5	5																1·65		0·78	0·56	9	12	10	0	0
Brandon	49	51	99	57	1176					31·6	+20·3	23	78·0			0·0	9	2·8																1·61		0·75	0·82	4	5·2	1	0	0
Birtle	50	25	101	1	1703																																	
Berens River	52	18	97	23	710																																	
Carberry	49	52	99	20	1258			28·9			6	72·0		23	−16·0		6	22·7															0·61		0·21	5·26	3	0	1
Carman	49	31	98	0	872																																	
Cypress River	49	33	99	3	1232																																	
Hillview	49	55	100	33	1400			31·8	+21·5	21	75·0				11·0		3	32·1																2·15	1·28	1·20	4	15	2	0	2
Minnedosa	50	15	99	50	1620	29·91	30·18	29·18	1·00	31·5	+19·6	27	76·0			2·8	9	23·9																0·82	0·06	0·42	4	7	0	0	0
Morden	49	11	98	6	978					38·6		8	83·0		7	26·8																	1·73		0·81	5	25	3	0	1
Oakbank	49	57	96	12	740			30·6	+16·1	15	69·5			23	4·0		2	18·9																3·78	3·15	2·80	3	28	0	0	0
Pipestone	49	31	100	58	1400																																	
Portage la Prairie	49	57	98	17	830			35·2	+19·2	22	70·0			23	5·0	1·8	19·0																0·22	0·18	0·11	2	29	0	0	0
Portage la Prairie (2)	49	56	98	17																																		
Pierson	49	11	101	5	1531																																	
Stony Mountain	50	1	97	11	803			30·9	+17·1	28	72·0			24	14·0	7	24·1																0·63	0·38	0·63	1·9	0	0	1	0
Swan River	52	6	101	15	1112			32·1		2	69·0			24	16·0	1	23·0																0·45		0·25	3·5	0	0	0	0
Treherne	49	39	98	40	1212			35·1	+19·8	15	71·0			23	6·0	7	21·5																1·01		0·67	4·3	4	0	1	0
Virden	49	51	100	55	1443																																	
Winnipeg	49	53	97	7	709	29·95	30·51	29·20	1·31	31·1	+19·1	36	73·0		23	−1·2	2	21·6																1·65	1·04	0·68	10	21	1	0	0
ONTARIO—																																						
Alton	43	51	80	5	1250			32·5	+ 8·1	21	81·2			31	− 0·1	15	24·7																0·98	0·97	0·37	7	21	0	3	1
Aurora	43	57	79	24	885			35·1		2	73·1			30	6·3	15	22·0																0·92		0·31	6	25	0	3	0
Agincourt	43	47	79	16	850			38·2	+10·7	16	73·1			31	9·7	15	18·5																0·57	1·71	0·23	8	24	1	3	0
Barrie	44	23	79	41	889			33·6	+ 8·4	31	70·9			24	1·9	18	19·6			1	1	3	4	3	7	15	12	7	26	16	33	11	X	ENW	1·29	0·59	0·30	15	16	2	2	2
Beatrice	44	8	79	20	800			31·2	+ 9·6	35	70·0			30	− 4·0	17	22·0			1	6	2	0	0	5	21	11	3	12	26	33	1	III	ENE	1·45	1·09	0·48	7	24	2	2	2
Bruce Mines	46	18	83	55	595			29·8	+ 5·3	12	65·0			28	5·0	10	23·3																0·12	2·38	0·32	3	7	1	3	1
Birnam	43	2	81	55	690			39·9	+12·6	25	75·5			28	1·5	15	16·8					7	5	2	9	12	7	10	10	0	62				0·78	1·86	0·47	13	3	3	1	0
Brantford	43	10	80	21	770			39·0	+10·1	30	77·0	28		29	11·0	14	19·8																0·58	1·16	0·31	8	22	0	0	0
Bloomfield	43	39	77	21	260			35·0	− 5·7	11	66·0			29	5·0	15	15·2																1·19		0·50	4	15	0	0	0
Bancroft	45	1	77	50				30·1	+ 8·9	21	69·5			29	6·0	9	17·2																					
Copper Cliff	46	30	80	59				29·1		5	63·0	29		30	9·0	17	23·3																2·28		1·91	7	24	0	0	0
Clinton	43	32	81	37				31·6		7	71·0			30	7·0	15	18·1					2	1	2	9	15	6	11	15	1	62		0·56		0·20	8	23	0	3	0
Coldwater	44	37	79	40	600			31·5	+10·7	22	75·0			29	3·0	11	18·25·1																0·30	2·26	0·23	2	25	0	3	0
Cockburn Island	45	57	83	18	610			31·1	+10·1	13	67·0			25	6·0	17	21·6					1	1	2	2	10	11	12	12	8	62										
Cottam	42	7	82	15	646			31·6	+ 8·0	22	80·0			24	11·0	15	21·7			21	0	12	1	17	3	8	0	0	0	62				0·23	2·11	0·33	1	30	0	1	0
Chatham	42	23	82	12	595			33·1	+11·2	23	80·0			24	16·0	15	22·1																0·25	2·25	0·25	1	30	0	1	0
East Toronto	43	35	79	18				37·3		1	77·0			28	10·0	15	20·0																0·79		0·23	5	6	0	1	0
Elora	43	41	80	24	1274			35·2	+11·3	13	76·0			30	6·0	15	21·1																0·51	1·51	0·36	4	25	0	1	0
Gravenhurst	44	51	79	20	770			31·5	− 8·0	30	70·0	24	30	7·1	18	23·4				3	2	2	3	7	15	11	8	21	11	9	93	11	V	6SW	1·37	1·11	0·40	9	5	1	1	0
Guelph	43	33	80	16	1050			38·6	+13·0	22	75·0			29	10·0	15	20·1																0·67	1·69	0·63	3	28	0	1	0
Grimsby					282			40·0		1	78·0	29	30	13·0	15	19·9																				0	1	0	0
Huntsville	45	19	79	8				31·7		3	70·0		29	2·0	17	22·0																				0	1	0	0
Haileybury	47	29	79	50	687	29·98	30·15	29·27	1·18	29·3	− 9·8	17	66·5	28	16·0	17	23·0					6	1	1	1	14	5	5	11	15	62	11	V	21SW	0·78	1·47	0·20	7	24	2	1	0
Hamilton	43	16	79	51	303			40·1	+ 9·0	31	76·0			30	15·0	15	16·3																				0	2	0	0
Haliburton	45	1	78	28	1050			29·9	+ 5·6	21	65·0	24	30	8·0	17	18·26·3																	T		T	0·31	1	1	1	0
Kenora	49	48	94	32	1102			28·6	+ 8·2	11	70·0		23	0·0	2	11·6																	3·21	2·49	2·00	3	28	3	0	0
Kakabeka Falls	48	23	89	36	902			31·4	−	2	66·0		30	12·0	9	28·9																	0·53		0·20	4	27	0	0	0
Kingston	44	13	76	29	285	30·05	30·41	29·37	1·04	34·8	+ 7·1	36	59·2		29	7·1	15	15·7			6	1	2	8	3	1	6	25	6	6	0	62				1·98	0·32	0·56	9	22	0	0	0
Kinmount	44	15	78	38	920			28·1	+ 3·5	11	69·0		30	11·0	11	25·8																	1·11		0·38	6	25	0	2	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MARCH, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of cloudy days.	No. of days on which Thunder was heard.	No. of days on which Lightning was seen.
NEW BRUNSWICK—																																								
Bathurst	47 39	65 12	45					27 6	+ 2 2	36	46 0	24	1 5	19	17 5					2	1	13	0	2	19	18	7	0	62				2 18	0 25	0 41	14	17	0	0	0
Chatham	47 3	65 29	21	30 05	30 82	29 38	1 44	28 4	+ 2 2	36	46 0	24	1 5	19	17 5					2	1	13	0	2	19	18	7	0	62				2 18	0 25	0 41	14	17	0	0	0
Dalhousie	48 4	66 22	39					21 8	+ 3 1	29	51 0	3	0 0	6	18 5					0	0	8	1	1	1	18	0	2	31				1 63	0 21	0 7	6	25	0	0	0
Fredericton	45 57	66 36	161	30 06	30 60	29 10	1 20	28 8	+ 3 1	38	54 0	30	0 0	11	18 9			7	5	1	0	6	2	1	11	18	25	6	62	8 1	11 3	7 E.	1 82	0 20	0 43	9	22	0	0	0
Grand Manan	44 47	66 46	19	30 05	30 55	29 10	1 15	35 1	+ 1 9	26	46 0	23 25	14 0	18	12 1			6	5	1	2	1	1	1	11	5	28	11	62				0 78	0 07	0 25	7	24	1	0	0
Moncton	46 9	64 45	50					30 8	+ 1 7	43	19 5	26	8 0	11	17 15 1					1	0	3	0	1	1	5	15	5	31				1 26	0 26	0 75	6	25	0	0	0
*Point Lepreaux	45 1	66 28	30					32 9	+ 1 1	32	52 0	29	14 0	18	—			4	8	11	6	10	3	2	13	11	9	8	81	11	N		1 49	0 86	0 61	5	26	0	1	0
St. John	45 17	66 4	70	30 01	30 56	29 12	1 11	33 7	+ 3 2	57	52 7	29	10 9	19	11 8					2	7	6	2	2	9	13	1	10	5	62				1 72	0 35	0 91	11	6	1	0	1
St. Stephen	45 11	67 16	35					32 9	+ 5 0	43	71 5	25	6 0	18	17 1																										
Sussex	45 38	65 38	60					30 2	+ 3 7	43	19 0	29	10 0	12	13 0					0	1	1	3	0	5	4	1	16	28				2 56	1 73	1	5	9	0	0	0
NOVA SCOTIA—																																								
Halifax	44 39	63 36	88	30 05	30 00	29 19	1 11	33 8	+ 2 3	36	58 7	25	10 1	19	11 0					1	12	8	4	3	6	15	13	0	62				1 25	1 00	1 35	11	17	1	0	2
Port Hastings	45 39	61 32	45					31 6	—	19	48 0	3	7 0	23	12 1						8	1	6	2	6	0	8	0	31				3 25	—	—	7	21	0	2	2
Parrsboro'	45 23	64 19	40					32 6	+ 1 6	44	55 0	19	9 0	17	11 7																										
Sydney	46 10	60 10	35	30 03	30 50	29 57	1 00	30 7	+ 2 2	36	54 0	11	14 0	24	14 5					5	6	5	5	3	7	15	13	3	62				3 22	0 16	1 19	8	23	1	0	2
*Sable Island, E. Point	43 58	59 46	20					36 8	+ 1 1	27	57 0	1	25 0	27						0	7	0	15	5	24	0	42	0	93				2 10	0 75	1 80	4	25	0	0	11
Truro	45 22	63 18	90					32 7	+ 1 7	36	52 7	20	4 8	19	15 9					9	5	1	5	20	19	6	20	5	93				2 57	0 59	0 90	11	2	2	0	1
Windsor	44 59	64 6	90					33 1	—	48	53 0	21 26	11 0	19	13 7																		3 32	—	0 91	12	12	1	0	0
*Whitehead	45 15	61 8	20					31 2	+ 2 7	37	51 0	13	18 0	7						15	7	10	7	9	21	3	16	0	93				3 52	0 01	1 15	8	5	1	0	1
Yarmouth	43 50	66 2	67	30 07	30 69	29 48	1 12	35 5	+ 3 2	50	54 7	30	18 5	11	19 12 8					12	4	8	1	10	6	12	9	0	62				2 54	2 16	3 76	15	18	2	1	3
P. E. ISLAND—																																								
Charlottetown	46 11	63 10	38	30 04	30 51	29 38	1 16	30 1	+ 3 0	55	46 0	20	14 0	7	10 8					5	2	10	3	8	7	15	6	1	62				2 70	0 49	0 64	11	8	2	1	4
Hamilton	46 25	63 18						29 1	+ 1 3	11	17 0	21	13 0	6	13 2					2	2	2	3	3	8	11	0	0	31				1 70	—	0 75	6	25	0	0	4
NEWFOUNDLAND—																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 10	27	30 10	30 63	29 52	1 11	28 7	—	2	51 0	5	8 0	1	15 3					6	3	1	8	10	12	11	10	1	62				2 05	—	0 40	14	17	0	0	2
*Cape Norman	51 38	55 32						18 4	+ 0 6	25	35 0	9 9	20 —	10 0	1					11	13	6	4	2	18	13	23	0	93				3 02	—	0 80	18	1	1	0	0
*Point Rich	50 12	57 25	35					22 0	+ 1 1	26	46 0	11	8 0	1						27	8	18	2	5	19	6	8	0	93				3 30	—	0 40	9	22	0	0	0
Point aux Basques	47 35	59 10	27	30 02	30 55	29 33	1 22	26 8	—	2	41 0	11	11 0	2	10 9					4	4	11	4	10	3	7	15	1	62				5 84	—	0 88	22	4	0	0	2
St. John's	47 34	52 42	125	30 00	30 17	29 35	1 12	30 3	—	1 8	37 5	0	15 9	0	2 12 3			6	8	6	6	4	7	15	8	7	9	0	62				2 10	— 2 30	0 80	15	16	0	0	5
BERMUDA—																																								
Prospect	32 17	64 39	151	30 16	30 19	29 77	0 72	64 3	+ 1 4	19	72 0	23	55 0	29	9 8					8	18	6	4	15	3	3	5	0	62				2 02	3 43	0 40	1	18	0	1	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING MARCH, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days ·01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni	4·81	17	11	1·05	30	1·0	1	1·0	6	
Beaver Lake	1·61	13	18	0·35	18	0·5	1	0·5	3	
Cequitlam	3·55	9	22	1·24	1	.....	.....	.....	.....	
Denman's Island	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ferguson	1·65	7	20	0·45	20	24·0	4	7·0	4	
Goldstream Lake	1·71	17	11	1·76	1	5·5	1	5·5	5	
Grand Forks	0·95	7	21	0·55	23	0·8	3	0·3	8	
Hornby Island	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jordan River	5·92	19	12	1·20	1	.....	.....	.....	.....	
LittleQualicum(French Creek, V.I.)	1·85	5	26	1·14	1	.....	.....	.....	.....	
Monte Creek	0·25	3	28	0·19	19	.....	.....	.....	.....	
Naas Harbour	1·56	8	19	1·12	11	52·0	4	30·0	1	
Sooke	4·50	15	16	2·00	1	.....	.....	.....	.....	Fog 17, 18, 20, 21, 22.
Skidgate	6·51	11	15	1·70	5	5·0	2	3·0	3	
ALBERTA—										
Bardo	0·00	0	29	0·00	—	3·2	2	2·2	3	
Bismark	0·10	1	29	0·10	23	2·3	1	2·3	24	
Bruederheim	0·02	1	28	0·02	19	4·0	2	3·0	3	
Bittern Lake	0·00	0	28	0·00	—	2·3	3	1·3	4	
Conjuring Creek	0.00	0	30	0·00	—	2·5	1	2·5	3	
Coutts	0·00	0	31	0·00	—	0·0	0	0·0	—	
Dorenlee	0·00	0	30	0·00	—	1·0	1	1·0	5	
Grassy Lake	0·00	0	31	0·00	—	0·0	0	0·0	—	
Jumping Pound	0·51	1	27	0·51	23	3·6	3	2·1	31	
Josephsburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Kimball	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lacombe	0·30	1	30	0·30	23	2·0	1	2·0	23	
Langdon	0·41	1	29	0·41	22	0·5	1	0·5	5	
Macleod	0·00	0	29	0·00	—	1·5	2	1·0	31	
Mayton	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Okotoks	r	0	30	r	25	0·5	1	0·5	31	
Ponoka	0·30	1	28	0·30	23	1·0	2	0·5	24-28	
Sion	0·08	1	24	0·08	23	8·0	6	1·0	—	Aurora 4, 5, 6, 8, 15, 20, 21, 22 27, 28, 31. Thunder 23.
Wabamun	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SASKATCHEWAN—										
Elm How	2·53	6	25	0·61	27	0·0	0	0·0	—	
Hanley	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Last Mountain	0·37	2	29	0·28	27	0·0	0	0·0	—	
MANITOBA—										
Cartwright	1·28	2	27	1·08	29	0·7	2	0·5	6	Aurora 13,15, 30. Thunder 26
Deloraine	0·90	2	28	0·70	29	0·1	1	0·1	6	
Gretna	0·99	4	26	0·55	29	6·0	1	6·0	30	
Norquay	1·36	2	27	0·56	30	1·0	1	1·0	24	
Rapid City	0·18	2	28	0·13	29	1·1	1	1·1	23	
ONTARIO—										
Arden	0·66	5	26	0·23	19	2·0	1	2·0	11	Thunder 8.
Deer Park	0·45	3	26	0·25	20	1·1	2	0·6	16	Thunder 6, 20.
Dutton	0·40	1	30	0.40	19	0·0	0	0·0	—	Thunder 6, 19.
Emsdale	1·25	3	26	0·70	20	2·3	2	2·0	16	Thunder 6, 19, 31.
Ennismore	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goderich	0·30	1	30	0·30	20	.....	.....	.....	.....	
Georgetown	0·58	4	25	0·27	20	3·1	3	2·6	8	Aurora 6, 28, 31. Thunder 6, 20, 21, 30.
Lansdowne	.....	.....	.....	.....	.....	.....	.....	.....	.....	
MacCne	0·55	3	27	0·25	20	3·0	1	3·0	14	
Orangeville	1·26	3	26	0·73	5	2·3	2	2·1	13	
Princeton	0·56	2	28	0·45	20	0·5	1	0·5	8	Thunder 6, 20.
Sydenham	1·05	2	28	0·55	6	10·0	1	10·0	13	Thunder 6.
Strathroy	0·55	4	25	0·46	21	2·0	2	1·0	7-14	Thunder 6, 21.
Watford	0·55	3	28	0·43	19	.....	.....	.....	.....	
Westport	1·07	3	26	0·54	6	4·5	2	3·3	13	Aurora 27, 28. Thunder 31.
Wooler	0·86	3	27	0·63	6	2·0	1	2·0	13	Thunder 6, 20.
Westminster	0·71	1	30	0·71	21	.....	.....	.....	.....	Thunder 21.
Wiarton	0·47	3	24	0·19	6	6.2	5	2.0	13	Thunder 6, 19.
Wesley	0·37	5	20	0·22	20	8·5	6	1·0	8	Thunder 6, 20.
NEW BRUNSWICK—										
Point Escuminac	0·18	3	24	0·11	7	5·7	4	2·1	6-28	

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF MARCH, 1900.

STATIONS.	Hours Ending																	
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria				·06	·26	·37	·40	·45	·51	·49	·45	·46	·39	·29	·03			
Nanaimo				T	·21	·39	·40	·40	·38	·32	·37	·29	·21	·21	·05			
Vancouver				·01	·25	·39	·41	·39	·38	·35	·35	·40	·36	·27	·11			
Agassiz					·37	·35	·49	·44	·48	·54	·46	·34	·29	·10				
Tranquille				·13	·42	·57	·61	·64	·65	·67	·68	·66	·58	·50	·19			
Summerland				·13	·46	·57	·62	·76	·68	·70	·58	·63	·54	·35	·01			
Kamloops				·05	·38	·61	·66	·64	·68	·66	·67	·62	·51	·31	·01			
Edmonton				·08	·39	·55	·58	·60	·64	·65	·61	·64	·60	·45	·08			
Lethbridge																		
Lacombe				·05	·37	·50	·60	·67	·75	•·75	·74	·66	·61	·54	·25	T		
Medicine Hat			·01	·31	·50	·63	·69	·72	·74	·71	·67	·64	·48	·48	·02			
Fort Vermilion																		
Battleford				·08	·35	·50	·59	·61	·62	·70	·61	·60	·53	·29	·01			
Indian Head					·12	·48	·51	·27	·62	·63	·67	·67	·58	·22				
Moose Jaw				·12	·52	·69	·73	·72	·76	·79	·76	·81	·72	·66	·30			
Brandon				·13	·46	·58	·68	·72	·69	·66	·61	·59	·51	·29	T			
Winnipeg				·08	·32	·49	·61	·63	·63	·57	·62	·61	·59	·53	·17	T		
Haileybury				·15	·43	·50	·49	·52	·58	·67	·58	·50	·52	·46	·21			
Gravenhurst																		
Woodstock					·15	·50	·61	·70	·66	·59	·60	·57	·51	·37				
Lindsay					·11	·49	·61	·62	·58	·66	·59	·53	·41	·37	·15			
Barrie				·14	·45	·57	·66	·62	·66	·65	·65	·63	·59	·45	·07			
Toronto				·01	·31	·58	·63	·72	·73	·73	·68	·71	·75	·57	·11			
Kingston				·06	·31	·49	·44	·46	·41	·46	·41	·45	·42	·20	·02			
Ottawa				·11	·45	·61	·69	·68	·71	·70	·71	·75	·69	·55	·22			
Montreal				·05	·28	·45	·63	·71	·62	·57	·57	·60	·53	·41				
Quebec				·08	·29	·39	·48	·47	·55	·55	·51	·51	·50	·43	·04			
Sherbrooke																		
Fredericton				·09	·24	·45	·56	·53	·59	·61	·62	·59	·40	·41	·18			
Charlottetown				·13	·33	·39	·45	·52	·49	·52	·53	·56	·43	·30	·11			
Truro				T	·21	·45	·46	·44	·48	·51	·47	·43	·36	·32	·10			

—	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottet'wn.	Truro.
Registered duration in hours.	129	101	118	109	135	181	181	180		202	197		170	159	235	183	181	171		165	158	190	201	127	215	161	119		163	117	132
Percentage of possible duration	35	28	32	30	55	50	50	49		55	54		17	13	64	50	50	48		15	43	52	55	35	59	50	11		11	10	36
Difference from average	—3			+5									—1	+9		+7	+1			+11	+1	+15	+13	—7	+23	+ 5			—3		
Maximum percentage in one day	86	81	92	81	95	89	85	92		88	90		87	76	93	93	96	95		85	88	90	92	88	91	92	91		95	96	91
Date of maximum	12	12	13	11	25	25	25	21		16	29		25	15	11	8	1	2		3	5	26	3	3	10	21	10		10	11	11
No. of days completely clouded	6	6	5	8	0	0	2	0		1	1		1	7	1	1	5	2		5	7	0	1	11	3	3	1		7	8	6

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Minnedosa, III ; Haileybury, III ; Kinmount, IV; Waitefield, II ; Threehills Creek, IV; Gilt Edge, III ; Harmattan, IV; Halkirk, Pakan, II ; Aweme, III.

2. Gravenhurst, IV; Haileybury, IV; Montague, Kenora, III; Schreiber, IV ; Waitefield, IV.

3. Haileybury, III ; Dawnson, I ; Montague, Lake Talon, Kenora, III; Threehills Creek, IV.

4. Dawson, I; Lake Talon, Grenfell, III; Sion, III.

5. Waitefield, Sion, IV ; Peace River Crossing, IV ; Spirit River.

6. Grand Manan, IV; Sydney, IV; Charlottetown, IV; Truro, IV; Dawson, I; Fredericton, II; Lucknow, IV; Cape Magdalen, Birnam, IV; Port Dover, Chilcoten, III ; Waitefield, II; Threehills Creek, II ; Halkirk Esterhazy, II ; Esteven, II; Treherne, II ; Aweme, II; Crescent Lake, IV ; Georgetown, III; Cartwright, Sion, IV.

7. Kinmount, III; Schrieber, III ; Waitefield, III ; Gilt Edge, IV; Harmattan, IV; Halkirk, Waseca, Foxleigh, Aweme, III ; Peace River Crossing, IV ; Spirit River.

8. Dawson, IV; Kinmount, IV; Schreiber, IV; Chilcoten, III, Waitefield, III; Gilt Edge, IV; Halkirk, Hillsdown, IV; Esterhazy, III; Waseca, Hillview, IV; Treherne, IV; Aweme, II; Crescent Lake, IV; Sion, III.

9. Minnedosa, I; Haileybury, III; Waitefield, IV.

10. Toronto, IV; Haileybury, III ; Spirit River.

11. Madoc, II; Aweme, II.

12. Gilt Edge, II; Chaplin, IV; Foxleigh, Aweme, IV.

13. Bruce Mines. Kinmount, IV; Schrieber, IV; Chilcoten, III; Waitefield, II; Threehills Creek, II ; Gilt Edge, IV; Halkirk, Hillsdown. IV; Pakan, Cartwright.

14. Kinmount, IV; Waitefield, IV; Harmattan, IV ; Halkirk, Hillsdown, IV ; Pakan, III; Esterhazy, II; Chaplin, IV; Carberry ; Spirit River.

15. Kinmount, IV; Schreiber, IV; Waitefield, II; Threehills Creek, II; Halkirk, Hillsdown, Pakan, IV; Esterhazy, III; Waseca, Chaplin, IV; Grenfell, IV; Carberry, Crescent Lake, IV; Sion, IV.

16. Minnedosa, I ; Haileybury, IV ; Kinmount, IV ; Waitfield, IV ; Gilt Edge, II; Halkirk, Chaplin, IV; Cartwright.

17. Waitefield, II; Halkirk.

18. Halkirk.

19. Waitefield, III ; Gilt Edge, II; Esterhazy, IV; Waseca, Meota, IV.

20. Stonecliffe, II; Gravenhurst, III; Haileybury, III; Chicoutimi, North Gower, Lake Talon, Kinmount, IV; Schreiber, IV; Waitefield, IV; Pakan, IV; Emsdale, IV; Sion, IV.

21. Stonecliffe, II; Birnam, IV; Esterhazy, III; Sion, IV.

22. Stonecliffe, II; Sion, IV.

25. Waitefield, III.

26. Gravenhurst, III; Gilt Edge, II.

27. Southampton, IV; Montreal, I ; Quebec, II ; Grand Manan, IV; St. John, I ; Halifax, III ; Yarmouth, III ; Charlottetown, IV ; Truro, II ; Dawson, IV ; Fredericton, I ; Shawinigan Falls, Madoc, I; Montague, Bruce Mines, I; Schreiber, II; Alberni, Waitefield, I; Threehills Creek, II; Red Deer, Halkirk, Pakan, IV; Esterhazy, I; Pense, I; Glaslyn, Chaplin, III; Aweme, I; St Stephen, I; Emsdale, III; Westport, Sion, II; Lunnford, I ; Alix.

28. Parry Sound, IV; Southampton, IV; Toronto, IV; Gravenhurst, III ; Haileybury, I; Montreal, I; Quebec, II; Agincourt, III; Midland, Madoc, I; Montague, Haliburton, Bruce Mines, III ; Lake Talon, IV; Lucknow, IV; Schreiber, II; Waitefield, II; Harmattan, I; Foxleigh, Aweme, II; Emsdale, II; Westport, Georgetown, III; Sion, II.

29. Dawson, I; Lakefield, Kinmount, IV; Foxleigh ; Peace River Crossing, IV.

30. Grand Manan, IV; Yarmouth, IV; Dawson, IV; Lakefield, Bruce Mines, IV; Kenora, I; Chilcoten, II; Salmon Arm, Summerland, Waitefield, II; Threehills Creek, II; Gilt Edge, II; Halkirk, Pakan, III ; Pense, II ; Chaplin, II; Grenfell, II ; Estevan, III ; Hillview, I ; Treherne, Almasippi, I; Aweme, I; Crescent Lake, III; Cartwright, I ; Glaslyn, Spirit River.

31. Minnedosa, II; Winnipeg II; Gravenhurst, III; Haileybury, IV; Birnam, IV; Bruce Mines, IV; Lake Talon, IV; Lucknow, III; Waitefield, IV; Threehills Creek, III; Gilt Edge, III; Hillsdown, III; Waseca, Pense, II; Melfort, Chaplin, II; Grenfell, IV; Estevan, II; Brandon, Carberry, Aweme, II; Crescent Lake, IV; Georgetown, IV; Sion, IV ; Peace River Crossing, III.

Thunder recorded :

5. North Gower, Uplands.

6. Kingston, Parry Sound, Southampton, Toronto, Gravenhurst, Haileybury, Lindsay, Madoc, London, Woodstock, Abitibi, Agincourt, Beatrice, Stony Creek, Lakefield, Midland, Meaford, North Gower, Owen Sound, Montague, Orillia, Uxbridge, Shelburne, Hamilton, Huntsville, Brantford, Birnam, Bruce Mines, Bancroft, Clinton, Aurora, East Toronto, Elora, Grand Valley, Copper Cliff, Cockburn Island, Lake Talon, Lucknow, Kinmount, Ronville, Peterboro, Port Dover, Port Burwell, North Bruce, Paris, Emsdale, Strathroy, Westport, Georgetown, Wesley, Princeton, Wiarton, Wooler, Dutton, Sydenham, Deer Park.

8. Arden.

13. Lindsay.

17. Fruitvale.

19. Parry Sound, Beatrice, Midland, Hamilton, Bruce Mines, Aurora, Elora, Cockburn Island, Lake Talon, Ronville, Ursa, Emsdale, Wiarton, Dutton.

20. Parry Sound, Southampton, Toronto, London, Agincourt, Point Clark, Lakefield, Madoc, Meaford, Uxbridge, Shelburne, Haliburton, Brantford, Bloomfield, Birnam, Clinton, Grand Valley, Lucknow, Kinmount, Port Dover, North Bruce, Paris, Georgetown, Westminster, Wesley, Princeton, Wooler, Deer Park.

21. Strathroy.

22. Saskatoon, Foxleigh.

23. Saskatoon, Canington Manor, Govan, Sion.

24. Minnedosa, Georgetown.

25. Point Lepreaux.

26. Cartwright.

27. Orillia.

28. Grand Manan, Yarmouth, Shawinigan Falls, Lake Edward, Point Clark, East Toronto, Morden, Almasippi, Point Lepreux, St. Stephen.

29. Montreal, Port Stanley, Bruce Mines, Kinmount.

30. Montreal Toronto, Uxbridge, Haliburton, Birnam, Bruce Mines, Bancroft, Clinton, Aurora, Copper Cliff, Lake Talon, Kinmount, Schreiber, Ursa, Georgetown, Dutton.

31. Parry Sound, Lindsay, Quebec, Alton, Madoc, North Gower, Montague, East Toronto, Kinmount, St. Stephen, Emsdale, Westport, Uplands.

FORECASTS FOR MARCH, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1277. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	82	70	6	6	89·0
Saskatchewan	84	74	7	3	92·2
Manitoba	79	66	10	3	89·8
Lake Superior	98	69	19	10	80·1
Lower Lake	118	96	19	9	84·3
Georgian Bay	118	99	16	6	88·1
Ottawa Valley	107	83	22	2	87·8
Upper St. Lawrence	107	87	18	2	89·7
Lower St. Lawrence	111	88	20	6	85·9
Gulf	117	91	18	5	88·0
Maritime Provinces West	126	90	30	6	83·3
Maritime Provinces East	127	90	28	9	84·9
Total	1277	997	213	67	86·1

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
April, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. APRIL, 1910. No. 4.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

On Vancouver Island and the extreme southwestern mainland of British Columbia the mean temperature of the month was slightly below the average of several preceding years; but in the interior of the lower mainland the average was exceeded by from 1° to 3°. The first two weeks were showery and rather cool over the greater part of the province, but the following two weeks were fine and warm and the last two days of the month cool again. The distribution of precipitation exhibited several anomalous instances of difference from average, but generally speaking the amount was approximately normal on lower Vancouver Island and the lower Mainland but much above average along the northern coast line. The temperature exceeded 80° at most places between the 23rd and 25th and exceeded 90° at a very few stations.

In Alberta the mean temperature of April exceeded the average of twenty years by from 5° to 10°, the greater differences occurring in southern districts. Between the 20th and 27th temperatures ranging between 80° and 96° were registered in most districts. Sharp night frosts occurred several times during the month, especially on the 1st, 7th and 15th; about 10° of frost in the southern portion and about 20° in the northern. Precipitation was below average, rain or light snow flurries occurring on from 1 to 3 days only during the month.

In Saskatchewan the mean temperature of the month ranged from 7° to 11° above the average of twenty years. Temperatures were very high from the 23rd to 28th, approaching or exceeding 90° in most districts. In the early part of the month, and also upon the 15th to 18th, and 21st to 23rd, and 30th killing frosts were experienced. Precipitation, although irregularly distributed over the province, was generally less than average, rain or snow flurries occurring on less than 6 days at the majority of the stations.

In Manitoba the mean temperature of April was above average from 2° to 4°. The month was very windy with sudden changes in temperature. From the 15th to 18th, on 22nd and 23rd very heavy frosts occurred. At the end of the month, however, the wheat crop was reported to be showing well above ground and not to have been injured by frost. Precipitation consisted of both rain and snow, and was well above average in northern and central Manitoba, but elsewhere slightly less than normal was registered.

The mean temperature of April exceeded the average of many preceding years by from 3° to 6° over the greater part of Ontario. There were few really warm days during the month, but the temperature was remarkably equable with very little frost. Temperatures between 75° and 80° were registered about the middle of the first week. A colder period began about the 7th, and lasted till the 12th. The weather then became warmer and continued fairly equable until the last two days of the month when moderate frosts were recorded. Precipitation was well above average over the peninsula and eastern Ontario, except at some points on the Lake Erie shore, but in the Upper Lake region, the amount was either average or below.

Along the Upper and Middle St. Lawrence the mean temperature of April was from 4° to 6° above average, but along the Lower St. Lawrence and the Gulf was not so high and in fact was slightly below average at some points on the Gulf. The first week of the month was fine, showery the

beginning of the second, then fine till the middle of the third week when showery weather prevailed at intervals till the end of the month. Precipitation was well above average except at a few scattered points on the Gulf shore.

The mean temperature of April was above normal in the Maritime Provinces by from 2° to 6°. On the 5th and 6th, 20th, 25th to 27th high temperatures were recorded, exceeding 70° at most places. On the 12th and 13th, and 28th and 29th from 5° to 15° of frost were recorded. In New Brunswick, rain fell on from 6 to 17 days, with a total much above the normal over the greater part of the province. Stations on Passamaquoddy Bay and on the Island of Grand Manan reported precipitation below the normal. On the 13th and between the 19th and 23rd very heavy rainfalls occurred at many places, causing freshets, which assisted the lumbermen very much. On the 30th there was a heavy snowfall accompanied in many districts by thunder and lightning. In southern Nova Scotia the rainfall was very heavy, precipitation occurring on 15 to 20 days, including light snow on the last two days of the month. In Cape Breton Island and the northern portion of the Mainland, the precipitation was deficient. In Prince Edward Island about 40% in excess of the normal precipitation was recorded.

In Newfoundland the normal mean temperature was exceeded by from 3° to 4° while the amount of precipitation was much below average on the east coast.

ATMOSPHERIC PRESSURE.

Except in the extreme southwestern portion of British Columbia, the mean atmospheric pressure of the month of April was below normal from the Pacific coast to the Lower St. Lawrence. From the Lower St. Lawrence to the Atlantic coast the mean pressure was above normal. The extremes of difference from normal were —0 13 of an inch at Barkerville, B.C., and +0.08 at Sydney and Halifax, N.S.

HIGH AREAS.

Eleven areas of high pressure were charted during May ; one first appeared in the Yukon Territory, one on the Alaskan coast, one on the west coast of Vancouver Island, one near Lake Winnipeg, five on the United States Pacific coast, one north of the Georgian Bay district and one north of the Straits of Belle Isle. The general course of the systems was either over or to the southward of the Great Lakes. The area which passed into Newfoundland on the 18th from Labrador was decidedly energetic. It hovered over the Island until the 27th, spreading, between the 23rd and 26th, as far westward as the Maritime Provinces and Quebec.

LOW AREAS.

Seven areas of low pressure were charted for the month ; one first appeared in the Yukon Territory, five on the Northern British Columbian coast and one in the South Pacific States. The general course of the areas was over the Great Lakes, thence to the St. Lawrence Valley and the Maritime Provinces. Their rate of travel was as a rule very moderate, and in several instances the paths taken by them were most erratic. The depression which appeared on the British Columbian coast on the 19th, after reaching the Great Lakes on the 22nd, hovered in or near to the southern portion of the Lake Region until the 26th, its centre meanwhile continually altering its position. The system then passed rapidly down the St. Lawrence Valley.

WINDS.

In British Columbia, on Vancouver Island and over the mainland the south and west directions were the most general, with six days with strong and thirteen with fresh breezes.

In Alberta the direction was variable, with six days with strong and fourteen with fresh breezes.

In Saskatchewan the direction was variable, with nine days with strong and fourteen with fresh breezes.

In Manitoba the north and east directions predominated, with eighteen days with strong and four with fresh breezes and two gales, the gales continuing for three and two days respectively.

In the Lake Region the direction was variable, with eight days with strong and ten with fresh breezes and three gales, the latter occurring on the 6th, between the 16th and 17th, and on the 25th.

In the Ottawa and Upper St. Lawrence Valley the direction was variable, with seven days with strong and eleven with fresh breezes.

In the Lower St. Lawrence Valley and the Gulf the direction was variable, with thirteen days with strong and twelve with fresh breezes.

In the Maritime Provinces the direction was variable, with ten days with strong and twelve with fresh breezes.

The display of storm signals was resumed for all districts early in the month, navigation being then generally open. No gales occurred except on the Lakes. The only warnings issued were to the Lake Region for the storms of the 6th and 25th.

TEMPERATURE.

The mean temperature of April was below normal on Vancouver Island and many districts of the Lower Mainland and also in the northern portion of the province, but above normal in the lower interior. In Alberta the normal was exceeded by from 5° to 10°, in Saskatchewan by from 6° to 11°, in Manitoba by from 2° to over 4°. In Ontario the normal was exceeded generally by from 2° to 6°, but in some districts in the extreme south-west and along the shores of Lake Erie, rather less than normal was recorded. In Western Quebec, the mean temperature exceeded the normal by 4° to 6°; beyond Quebec City to Father Point, by about 2°; while in the Gulf districts the normal was not reached at some points. In the Maritime Provinces the normal mean was exceeded by from 2° to 6°, and in Newfoundland by about 4°.

The highest and lowest temperatures recorded in each Province during the month of April, 1910, were:

British Columbia,	92° at Kamloops on the 25th,	6° at Atlin on the 7th.
Alberta,	96° at Medicine Hat on the 26th,	9° at Pembina on the 7th.
Saskatchewan,	92° at Indian Head on the 20th, Moose Jaw on 25th and Rathmullen on 27th,	—6° at Lannigan on the 3rd.
Manitoba,	84° at Swan River on the 25th,	0° at Stony Mountain on the 15th and Carberry on the 15th and 23rd.
Ontario,	81° at North Bruce on the 5th,	4° at Schreiber on the 23rd.
Quebec,	77° at Brome on the 6th,	8° at Clarke City on the 30th.
New Brunswick,	73° at Moncton on the 25th,	15° at Dalhousie on the 13th.
Nova Scotia,	71° at Windsor on the 7th,	15° at Port Hastings on the 28th.
P. E. Island,	70° at Hamilton on the 27th,	22° at Hamilton on the 30th.

PRECIPITATION.

The precipitation of April was below the normal amount in many places in Southern British Columbia, and generally above in the northern districts of that province; in Alberta and Saskatchewan below normal, except in extreme southwestern Alberta; in northern and central Manitoba, above average, below elsewhere; well above average generally over Ontario, and quite heavy in those counties lying between the Georgian Bay and Lake Ontario and those counties contiguous to Lake St. Clair; above average over Quebec and the greater part of the Maritime Provinces, the most notable exception being Cape Breton Island and the mainland adjoining.

BRIGHT SUNSHINE.

The registered amount of bright sunshine was above average in British Columbia and Alberta, below average in Northwestern Saskatchewan, above average in eastern Saskatchewan and Manitoba, and below average in Ontario, Quebec and the Maritime Provinces.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, APRIL, 1910

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Pressure. Highest.	Pressure. Lowest.	Pressure. Range.	Temperature. Mean.	Temperature. Difference from average.	Temperature. Years observ'n	Temperature. Highest.	Temperature. Date.	Temperature. Lowest.	Temperature. Date.	Temperature. Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Velocity of wind. Highest day's velocity.	Velocity of wind. Date and direction from.	Precipitation Amount.	Precipitation Difference from average.	Precipitation Heaviest fall in month.	Days with .01 inch or more	No. of days	No. of days	No. of days
BRITISH COLUMBIA—				in.	in.	in.	in.																																
Alberni (Beaver Creek)	49 15	124 49	30	...	...	...	...	46·5	2·2	15	79·0	23	25·0	6	11	26·2																							
Agassiz	49 14	121 31	62	...	...	...	...	50·0	+ 0·5	19	84·0	23	30·0		28	24·6																							
Atlin	59 35	133 38	2240	29·88	30·31	29·29	1·02	29·1			59·0	30	5·2		7	16·2																							
Barkerville	53 2	121 35	4180	29·79	30·31	29·31	0·97	35·9	0·5	23	65·0	23	10·0		3	18·7		6	1	0	2	0	1	0	12	6	0	38	66	3·7	30·0	15	SW	1·—	—	1·0	16	8	1	0
Bella Coola	52 40	126 51	150	...	...	...	...	42·6	1·6	11	75·0	26	24·0		11	20·1																							
Babine Lake				25·76				41·0				21	11·5		10	21·5																							
Chilcotin (Big Creek)	51 40	123 0	3100	30·8				47·8			78·0	25	17·0	11	27	30·1																							
Cranbrook	49 30	115 50		26·3				41·7			87·0	21	12·5		4	30·7																							
Chyoquot	49 11	125 47	40	...	...	...	...	44·6	— 1·1	11	61·0	18	30·0		16	16·7																							
Cowichan (Tzouhalem)	48 24	123 42	170	...	...	...	...	47·1	—		73·0	23	28·0		17	29·3																							
Enderby	50 32	119 7	1180	...	...	...	...	47·0	—		88·0	24	26·0		18	28·7																							
Fairview								54·7			85·0	24	35·0	7	31	25·5																							
Fruitvale								48·3			86·5	25	23·0		3	29·5																							
Glacier	51 14	117 29	4072	...	...	...	...	36·1	— 0·6	13	57·0	26	28·0		4	11·6																							
Golden	51 16	116 58	2580	...	...	...	...	44·3			80·0	25	29·0		3	24·5																							
Holberg								49·9			82·0	24	31·6		6	11·2																							
Hedley	49 35	120 10						48·8			89·0	25	28·0		6	27·2																							
Hedley (Nickel Plate)								50·2			86·0	24	28·0		12	20·5																							
Hope								48·5			90·0	23	30·5		3	22·9																							
Ikeda Bay	52 17	131 7	5					43·7	—		2·0	0	27·0		4	17·7																							
Kamloops	50 41	120 20	1215	29·03	30·30	29·11	0·95	52·4	+ 2·5	18	91·5	25	28·0		3	24·7		44	7	5	0	8	6	13	7	7	5	2	11	60	3·7	30·0	15	SW	0·1	0·2	0·8	8	1	0	0
Ladner	49 5	123 1						47·0	— 0·1	11	70·0	23	31·0	27	29	16·7																							
Massett, Q.C.I.	53 58	132 9	30					43·9	+ 5·1	13	55·0	19	32·0		5	11·7																							
Midway	49 0	118 50	1880																																			
aNanaimo	49 10	123 37	120	29·91	30·35	29·30	1·05	45·7	0·8	41	68·5	24	27·5		6	19·0		73	6	3	0	5	8	36	1	1	10	11	18	90	7·5	21·0	16	NW	1·0		0·8	7		1	0
Nicola Lake	50 9	120 30	2120					45·8	+ 2·0	15	84·5	26	33·0		3	25·7																							
North Nicomen	49 12	122 2	50					48·7	— 0·1	18	83·0	23	33·0	2	17	18·1																							
New Westminster	49 13	122 54	330	30·08	30·18	29·18	1·00	46·8	— 1·5	22	77·0	23	31·8		2	17·5		80	7	10	1	2	18	0	7	15	1	1	12	60	1·5	11·0	18	S	3·8	0·6	0·8	15	7		
Needles																																							
Nelson	49 29	117 21	1790					49·7			79·0	24	25·0		2	25·6																							
Okanagan Mission (Kelowna)	49 52	119 29	1250					48·7	1·7	11	81·0	24	25·0		3	24·1																							
Port Simpson	54 31	130 26	26	29·80	30·27	29·30	0·88	40·1	3·7	24	57·5	25	27·3		11	12·5		95	7	12	1	1	13	18	7	8	0	6	6	60	8·5	37·0	15	SW	10·17	2·76	2·16	12	4	1	0
Princeton	49 29	120 29	1650					45·7	+ 1·6	13	87·0	25	32·0	3	30	32·0																							
Penticton	49 29	119 35						49·3	—		87·0	24	32·4		2	24·3																							
Pemberton Hatchery								45·5	—		78·0	25	24·5		3	21·2																							
Prince Rupert	54 18	130 18																																					
Quesnelle	52 59	122 30	1700					42·2	— 2·1	11	81·0	24	16·0		3	30·7																							
Revelstoke	51 0	118 6	1476					45·0	+ 2·7	11	76·0	25	27·0		3	22·0																							
Rossland	49 5	117 18	3000				....	47·1			76·0	24	26·5		11	18·1																							
Ruskin (Stave Falls)	49 16	122 23	125					47·9			82·0	23	32·0	16	20	21·3																							
Stuart's Lake (Fort St. James)	54 28	124 12	2280					37·2			70·0	23	15·0	2	11	24·1																							
Salmon Arm	50 42	119 35	1245					49·8			85·0	25	24·0		3	22·9																							
Steveston (Garry Point)	49 21	123 17						45·9	+ 1·4	15	65·0	26	32·0		11	11·9																							
Swanson Bay								38·0			76·0	30	28·0		16	11·6																							
Salt Spring Island	48 50	123 20						46·2			68·5	23	30·0	3	17	18·2																							
Summerland	49 57	119 0	1100					49·3			84·0	21	30·0	3	30	22·6																							
Tobacco Plains (Elko)	49 1	115 5	2681					51·3	+ 6·7	15	86·1	25	25·0		11	22·1																							
aTranquille	50 11	120 29		28·73	29·16	28·23	0·93	51·0	—		88·5	25	21·0		3	26·1		15	6	2	1	4	12	4	5	11	23	10	20	90										
Vernon (Coldstream Ranch)	50 14	119 15	1575					49·3	+ 2·9	16	85·0	24	24·0		3	22·1																							
Victoria	48 24	123 19	85	30·06	30·47	29·46	1·01	47·6	— 1·3	22	68·7	23	32·2	11	17	11·9		72	7	7	8	3	5	4	10	11	9	3	4	60	9·2	24·0			1·0	0·4	0·1	12	8	1	0
Vancouver	49 17	123 5	130	30·06	30·51	29·48	1·03	47·2	+ 0·3	11	71·8	23	32·6		17	16·1		71	6	7	0	2	11	10	2	13	13	1	5	60	1·3	12·0	16	W	3·0		0·8	15	15	1	0
Winter Harbour	50 32	128 3						42·3			80·0	25	31·0	11	17	11·2																							
Wilmer								45·9			85·0	25	20·0	3	15	27·8																							

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, APRIL, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observ'n	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
SASKATCHEWAN—*Con.*				in.	in.	in.	in.																																	
Scott (Hearts Hill)								13·2	—	1	85·0	21	10·0	17	31·4																									
Waseca	53	6	109	29				12·1		3	86·0	21	16·0	1	25·2					6	2	7	9	3	1	0	0	0	30				0·13		0·13	1	9	0	0	0
Yorkton	51	41	102	29																													0·04		0·04	1	5	1	0	0
MANITOBA—																																								
Almasippi	49	11	99	20				12·6		8	68·0	21	13·0	23	25·8																		2·12		0·60	6	21	0	3	0
a Aweme (St. Alban's)	49	42	99	34	1180	28·91	28·22	28	19	1·03	41·0	+ 4·1	25	78·5	20	11·5	15	23	24·8														0·72	0·19	0·30	5	25	4	3	0
Aitkensville								35·9		1	75·2	21	1·5	23	24·4																		1·61		1·61	12	18	12	0	0
Brandon	49	51	99	57	1176			12·3	+ 3·2	22	81·0	25	12·0	18	3·1			5	6	9	30	10	7	1	7	6	2	0	90	4	111	21 SW.	0·54	0·21	0·25	5	25	0	0	0
Birtle	50	25	101	1	1703																																			
Berens River	52	18	97	23	710																																			
Carberry	49	52	99	20	1258			33·9	—	5	70·0	7 13	0·0	15 23	25·3					17	0	0	2	0	5	17	2	17	60				0·51	—	0·20	2	28	0	4	1
Carman	49	31	98	0	872																																			
Cypress River	49	33	99	3	1232																																			
Hillview	49	55	100	23	1400			43·1	+ 1·3	21	83·0	20	11·0	23	26·6			3	3	12	11	18	7	8	6	7	21	0	90				1·76	+ 0·14	0·75	7	23	0	1	1
Minnedosa	50	15	99	50	1630	29·97	30·51	29	10	1·14	42·8			78·5	25	11·1	29	25·1		5	1	9	4	9	8	3	2	0	7	18	60				1·46		0·41	7	23	2	1	1
Morden	49	11	98	6	978			42·9		6	78·7	26	14·0	16	25·1																		1·71		0·70	9	21	0	1	0
Oakbank	49	57	96	42	740			40·7	+ 3·5	21	72·0	25	14·5	22	21·3					1	2	2	1	2	7	4	8	0	30				1·98	+ 0·45	0·48	4	26	0	2	0
Pipestone	49	34	100	58	1400																																			
Portage la Prairie	49	57	98	17	850			41·7	+ 2·2	20	80·0	25	15·0	15	23·5																									
Portage la Prairie (2)	49	56	98	17																													2·86	+ 1·34	2·00	5	25	0	0	0
Pierson	49	11	101	5	1531																																			
Stony Mountain	50	4	97	11	803			40·5	+ 2·1	28	75·0	26	0·0	15	30·3					10	6	8	5	12	2	2	15	0	60				0·53	— 0·38	0·53	2	28	0	1	0
Swan River	52	6	101	15	1112			39·2		2	81·0	25	16·0	15 21	22·3																		1·85		0·76	4	26	0	0	0
Treherne	49	39	98	40	1212			41·5	+ 3·1	15	72·0	20	11·0	16	26·1																		1·15		0·32	6	24	0	1	0
Virden	49	51	100	55	1144																																			
Winnipeg	49	53	97	7	760	29·97	30·57	29	13	1·14	42·9	+ 1·3	35	75·0	25	15·3	22	25·4															1·49	0·05	0·42	7	23	0	2	0
ONTARIO—																																								
Alton	43	51	80	5	1250			42·6	+ 3·1	21	78·2	6	16·8	12	25·4			4	4	23	2	30	1	8	10	9	1	0	90	11	IV	25	1·47	+ 2·36	1·10	10	9	0	0	0
Aurora	43	57	79	27	886			45·1	—	2	75·0			12	20·6																		1·92	+ 3·01	2·05	8	22	0	0	0
Agincourt	43	47	79	16	590			46·5	+ 3·6	15	73·3	15	25·2	13	19·1					3	10	19	8	2	12	1	21	1	80				1·20	+ 2·12	1·13	11	19	0	1	2
Barrie	44	23	79	41	850			44·1			72·0	5	22·0	7	12	16·9				10	9	11	12	6	2	4	23	13	90				3·94		1·12	16	14	2	1	2
Beatrice	45	8	79	20	840			44·7	+ 6·2	10	71·0		22·0		21·0			6	10	6	1	1	18	11	4	1	16	31	90	1	IV	17 SE.	2·55	+ 0·11	0·69	11	19	0	1	3
Bruce Mines	46	18	83	55	595			42·4	— 5·5	11	62·0	11	19·0	12	18·6																		1·77		1·28	12	18	3	1	3
Birnam	43	2	81	35	600			46·0	+ 2·0	25	77·2		31·3	15	17·3					20	2	6	8	11	2	2	8	1	60				3·13	+ 0·65	1·05	11	19	1	1	2
Brantford	43	10	80	21	750			42·5	+ 1·4	13	79·0	5	25·0	7	11	20·2																		2·10	+ 0·27	0·90	10	20	0	0	0
Bloomfield	43	59	77	21	260			46·6	+ 2·9	12	73·0	6	26·0	12	18·6																		3·01		1·15	7	13	0	0	1
Bancroft	45	1	77	50				46·1	+ 9·6	19	75·0	5	17·0	5	21·6																		2·10		1·10	7	13	0	0	0
Copper Cliff	46	30	80	59				43·1	—	3	68·0	5	21·0	5	18·8																		2·85		0·65	10	20	0	0	0
Clinton	43	32	81	35				44·8		8	77·0	6	12·0	13	18·6					5	11	7	11	11	0	4	11	0	60				2·08		0·45	11	16	0	0	3
Coldwater	44	38	79	40																																				
Cockburn Island	45	57	83	18	610																																			
Cottam	42	7	82	15	696			46·0	0·0	32	78·0	16	21·0	12	22·1					15	0	10	8	17	5	4	1	0	60				1·85	+ 2·17	1·65	9	21	0	0	3
Chatham	42	23	82	12	595			48·1	+ 3·0	23	76·0	5	21·0	8	13	22·1																		1·67	+ 2·10	1·15	10	20	0	0	0
East Toronto	43	35	79	18				45·1		4	77·0	11	25·0	12	18·5																		1·51		0·90	12	18	0	1	0
Elora	43	41	80	24	1271			45·1	+ 5·0	11	77·0	6	24·0	8	12	21·4																		3·18	+ 1·38	0·95	15	15	0	0	0
Gravenhurst	44	54	79	20	770			45·0	+ 4·8	30	75·0	5	23·0		20·6			6	7	16	1	10	23	5	6	11	8	7	90	11	V	3 SE.	2·94	+ 1·33	0·76	11	19	3	1	1
Guelph	43	33	80	16	1050			46·9	+ 8·0	32	77·0	5	25·0	8	13	20·5																		3·12	+ 1·39	0·60	12	18	0	1	1
Grimsby								46·1	—	1	71·0	15	23·0		18·8																		3·73		0·81	12	18	0	0	0
Grand Valley								43·8	—	1	72·0	5	23·0	12	21·7																		3·05		1·39	16	14	0	0	0
Huntsville	45	19	79	8																																				
Haileybury	47	29	79	39	687	29·98	30·33	29	5·0	0·8	42·1	— 1·0	17	70·0	5	20·2	28	19·2																						
Hamilton	43	16	79	51	303			46·6	+ 3·3	31	74·0	11	28·0	8	13	15·1				19	0	2	8	6	2	0	13	10	60	11	IV		2·31	+ 0·79	0·64	15	15	5	1	1
Haliburton	45	1	78	28	1050			46·1	+ 5·1	21	76·0	5	20·0		12·2																		2·05	+ 0·65	0·57	11	19	0	1	0
Kenora	49	48	94	32	1102			37·3	0·2	11	70·0	11	8·0		18·6																		2·46	+ 0·05	1·10	7	23	3		0
Kakabeka Falls	48	29	89	36	912			39·5		2	72·0	26	15·0		26·1																		3·30		1·02	5	25	2	1	0
Kingston	44	13	76	29	285	29·96	30·31	29	3·8	0·86	46·5	+ 1·9	35	70·0	5	25·2		12·1	7	3	17	2	7	1	12	7	11	0	60				2·10		1·13	8	22	1	2	1
Kinmount	44	45	78	38	920			44·1	+ 4·9	11	69·0	5	19·0		11·2																		2·57	+ 0·78	0·98	13	17	0	1	3
																																	2·61	+ 0·32	0·89	7	23	0	0	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, APRIL, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
NEW BRUNSWICK																																								
Bathurst	47 39	65 42	15																																					
Chatham	47 3	65 29	21	30 00	30 16	29 60	0 86	42 2	+ 4 1	36	72 5	26	20 0	13 17	5					1	2	23	2	1	7	11	12	1	60				3 28	+ 3 11	1 18	15	15	6	0	0
Dalhousie	48 4	66 22	39					35 8	+ 3 3	33	63 0	27	15 0	13 15	0					0	0	11	5	0	0	12	1	0	30				1 30	+ 0 02	0 96	6	24	0	0	0
Fredericton	45 57	66 38	164	29 99	30 42	29 39	0 83	44 5	+ 5 7	38	72 0	6	20 0	12 18	8		76			3	6	10	2	5	10	8	25		80				3 10	+ 1 56	1 16	10	20	2	2	3
Grand Manan	44 47	66 46	19	29 98	30 45	29 53	0 92	43 0	+ 3 4	27	63 6	20	25 0	12 13	0					0	3	10	6	6	15	4	13	1	60				3 12	0 11	0 59	7	23	1	1	13
Moncton	46 9	64 45	50					41 8	+ 6 3	12	73 0	25	19 0	29 19	2					1	2	6	7	0	1	11	0	30					2 05	0 15	11	19	6	1	1
*Point Lepreaux	45 4	66 28	30					39 9	+ 2 7	32	53 0	25	25 0	29						2	4	26	3	4	21	2	12	0	78	11	18	28 N	3 76	+ 3 12	1 82	8	22	0	1	11
St. John	45 17	66 4	70	29 98	30 41	29 60	0 81	43 8	+ 4 3	37	66 5	25	25 7	29 12	1					2	3	11	8	12	4	4	10	5	60				2 36	+ 1 26	2 33	17	13	3	3	5
St. Stephen	45 11	67 16	30					43 7	+ 3 5	11	70 0	5	29 0	12 19	6																		2 51	1 06	0 86	5	25	1	1	0
Sussex	45 38	65 38	60					41 2	+ 5 6	13	71 0	25	21 0	13 17	2					0	2	0	4	1	4	3	1	15	30				1 36	—	0 85	5	25	0	1	0
NOVA SCOTIA																																								
Halifax	44 39	63 36	88	30 01	30 18	29 60	0 88	42 1	+ 2 3	36	67 8	9	23 6	30 14	8					6	10	2	8	9	12	4	9	0	60				3 21	+ 3 02	2 30	20	10	1	1	6
Port Hastings	45 39	61 32	15					43 0	+ 5 9	18	70 0	6	15 0	28 10	1					6	4	9	12	9	4	6	4	0	30				2 03	1 16	0 88	8	27	0	0	2
Parrsboro'	45 23	64 19	10					41 3	+ 10 7	13	63 0	7	22 0	12 15	6																								0	0	0
Sydney	46 10	60 10	35	30 02	30 45	29 63	0 82	39 8	+ 3 0	37	69 5	26	22 4	30 11	2			8	15	15	11	1	5	8	9	6	13	2	60				3 40	0 61	1 36	10	20	0	0	0
*Sable Island, E. Point	43 58	59 46	25																																					
Truro	45 22	63 18						44 3	—		70 2	26	18 3	30 18	1					8	1	0	26	11	11	15	10	5	90				4 48	—	1 61	15	15	3	0	2
Windsor	44 59	64 6	80					44 7	—		8 70	5	22 0	30 16	8																		4 91	—	0 91	17	13	0	0	1
*Whitehead	45 15	61 8	20					38 7	+ 1 7	28	49 0	26	26 0	29																			1 46	2 16	0 47	4	26	0	0	11
Wolfville	45 7	64 20						35 1	+ 4 2	11	69 1	7	24 3	30 17	2		85	7	13	3	5	5	11	7	4	13	6	6	60				3 09	2 25	1 28	16	14	1	0	3
Yarmouth	43 50	66 2	65	30 00	30 15	29 65	0 80	44 2	+ 1 0	30	65 2	25	22 7	13 13	7					6	1	7	9	12	7	5	10	3	60				3 30	1 77	1 71	13	17	0	2	12
P. E. ISLAND																																								
Charlottetown	46 14	63 10	35	30 00	30 13	29 70	0 73	42 5	+ 5 4	35	61 0	25	23 0	29 13	1					3	6	13	13	9	11	7	5	0	60				1 09	+ 1 11	0 73	1	15	1	1	6
Hamilton	46 25	63 18						42 3	+ 6 7	12	70 0	27	22 0	30 15	0					3	1	1	7	5	7	3	2	0	30				3 87	—	1 80	10	20	0	0	2
NEWFOUNDLAND																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 14	27	30 10	30 58	29 51	1 07	36 4	—		2 61	0	23 21	0 18	11 4					5	1	8	4	9	11	8	10	1	60				0 75	—	0 23	8	22	0	0	6
*Cape Norman	51 58	55 52																																						
*Point Rich	50 42	57 25	35					31 2	+ 1 2	27	50 0	23	18 0	30						20	9	23	1	10	15	9	3	0	90				0 80	+ 0 41	0 46	3	27	0	0	2
Point aux Basques	47 36	59 10	27	30 01	30 49	29 58	0 91	31 3	—		2 48	0	23 21	5 1	30	7 7				4	1	27	4	2	1	10	11	0	60				3 19	—	1 23	15	15	0	0	1
St. John's	47 31	52 42	150	29 98	30 53	29 45	1 08	38 2	+ 8	38	65 0	35	23 0	5	12 5			6	9	13	0	4	6	9	9	6	4	9	60				1 65	1 41	0 50	9	21	0	0	7
BERMUDA																																								
Prospect	32 17	64 39	151	30 11	30 36	29 72	0 61	65 1	+ 1 0	19	73 2	3	56 8	18 9	1					7	7	4	10	9	6	3	13	1	60				9 30	+ 3 37	4 26	11	19	0	1	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, & DURING APRIL, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni										
Beaver Lake	1·10	6	24	0·42	7					
Coquitlam	5·24	6	24	1·47	5					
Denman's Island	1·97	5	25	0·95	2					
Ferguson	3·58	7	22	0·85	5	16·0	1	6·0	5	
Goldstream Lake	3·69	16	14	1·08	7					
Grand Forks	0·29	6	21	0·11	9					
Hornby Island	0·15	5	25	0·19	7					
Jordan River	1·69	18	12	1·12	7					
LittleQualicum (French Creek, V.I.)	0·50	2	28	0·40	16					
Monte Creek	0·70	1	29	0·70	9					
Naas Harbour	7·83	9	21	1·41	21					
Sooke	2·30	10	20	0·70	7					
Skidgate	8·99	15	15	1·32	15					
ALBERTA—										
Bardo	r	0	29	r	13	1·0	1	1·0	7	
Bismark	r	0	30	r	21	"	1	"	6	
Bruederheim	0·27	2	28	0·16	28					
Bittern Lake	0·01	1	29	0·01	12					
Conjuring Creek						1·3	2	1·0	6	
Contts	0.01	1	29	0·01	29					
Dorenlee	1·00	1	29	1·00	19	"	1	"	29	Thunder 19.
Grassy Lake	0·05	1	29	0·05	30	2·0	1	2·0	30	
Jumping Pound	0·43	1	27	0·43	27	2·1	2	1·6	6	
Josephsburg										
Kimball										
Lacombe	0·03	2	28	0·02	21					Ice ¾ of an inch on 30th.
Langdon	0·05	1	29	0·05	12	"	2	"	—	
Loch Stoy	0·40	4	26	0·27	29	1·0	1	1·0	11	Aurora 12, 18, 26, 27, 28.
Macleod	0·12	1	28	0·12	27	5·0	2	5·0	30	
Mayton										
Okotoks	0·16	3	27	0·08	20	"	3	"	—	
Ponoka	0·06	2	26	0·04	23	2·0	2	1·5	4	
Sion	1·00	1	23	0·40	28	3·5	3	3·0	6	Aurora 1, 7, 11, 14, 15, 16, 29, 30. Thunder 27.
Wabamun										
SASKATCHEWAN—										
Elm How	0·06	3	26	0·02	—	0·5	1	0·5	30	
Hauley						0·5	1	0·5	30	
Last Mountain	0·32	2	28	0·22	12					Thunder on 12.
MANITOBA—										
Cartwright	1·56	7	23	0·65	28	1·0	3	1·0	15	Aurora 2, 11, 17, 26, 29. Thunder 3, 12, 13, 20.
Deloraine	0·65	3	25	0·30	—	2·5	2	2·0	14	
Gretna	1·01	4	23	0·50	14	5·5	5	2·0	15	Thunder 4.
Norquay	0·43	1	25	0.25	15	2·0	2	2·0	16	Thunder 4, 13, 14.
Rapid City	0·82	1	25	0·16	14	0·7	2	0·7	16	
ONTARIO—										
Arden	2·00	9	21	0·93	25	1·0	1	1·0	11	Thunder 20.
Deer Park	1·25	12	18	0·78	25					
Dutton	2·75	6	24	0·90	19					Thunder 30.
Emsdale	2.02	13	17	0.38	18					Aurora 11. Thunder 26.
Ennismore										
Goderich	1·54	7	22	0·10	16	2·0	1	2·0	7	
Georgetown	4·02	16	11	0·85	29	"	2	"	—	Thunder 5, 23, 29.
Lansdowne										
MacCue	2·57	5	25	0·86	24					
Orangeville	5·51	7	22	1.80	20	1·5	1	1·5	12	
Princeton	2.52	9	21	1.09	20					Thunder 28.
Port Dalhousie (Grantham)	5·09	17	13	1·08	20	"	1	"	7	
Sydenham	2.52	4	26	1·12	17					
Strathroy	3·17	14	15	1·10	19	0·5	2	0·5	7	
Watford	3·20	7	23	1·13	17					Aurora 26, 27. Thunder 19, 26.
Westport	3·16	8	22	1·25	18					
Wooler	1·59	5	25	2·06	25	"	1	"	11	
Westminster	2·14	5	25	0·92	20					
Wiarton	3·01	8	22	1·59	19					Thunder 11.
Wesley	3·23	15	11	1 16	20	1·7	2	1·7	11	Thunder 11, 29.
NEW BRUNSWICK—										
Point Escuminac	3·58	7	22	1·73	9	5·3	2	2·1	30	Thunder 7.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF APRIL, 1910.

STATIONS.	Hours Ending																			
	1 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria			·03	·30	·45	·53	·55	·56	·61	·58	·56	·58	·54	·41	·37	·02		
Nanaimo			·11	·31	·39	·56	·61	·62	·58	·66	·60	·52	·43	·42	·36	·06		
Vancouver			·08	·31	·40	·47	·47	·48	·54	·56	·56	·59	·59	·47	·42	·19		
Agassiz			....	·08	·23	·35	·43	·48	·46	·39	·28	·30	·28	·14	·01			
Tranquille			·08	·30	·41	·55	·57	·63	·62	·59	·58	·56	·50	·48	·38	·17		
Summerland			·19	·44	·58	·58	·54	·62	·60	·54	·46	·48	·44	·40	·36	·02		
Kamloops			·07	·38	·39	·52	·56	·67	·63	·58	·63	·60	·56	·39	·26	·02		
Edmonton			·11	·16	·40	·63	·66	·70	·71	·70	·62	·61	·58	·32	·34	·08		
Lethbridge			·16	·49	·52	·67	·77	·75	·79	·75	·75	·75	·68	·61	·46	·12		
Lacombe			·08	·35	·49	·51	·63	·68	·68	·70	·67	·63	·61	·45	·42	·18		
Medicine Hat		·10	·50	·63	·68	·73	·72	·70	·70	·67	·69	·69	·61	·47	·09			
Fort Vermilion		....	.....	·08	·21	·37	·46	·56	·61	·56	·51	·56	·44	·29	·09			
Battleford		....	·02	·26	·41	·53	·58	·59	·61	·56	·57	·54	·54	·55	·37	·08		
Indian Head		....	·01	·16	·45	·61	·72	·81	·77	·72	·69	·65	·60	·38	·24	·05		
Moose Jaw			·15	·54	·67	·71	·80	·80	·80	·84	·73	·75	·65	·57	·49	·17		
Brandon																		
Winnipeg			·04	·31	·51	·62	·69	·69	·70	·65	·65	·68	·62	·57	·49	·33	·02	
Halleybury			·01	·21	·29	·32	·43	·44	·49	·52	·51	·49	·44	·44	·32	·09		
Gravenhurst																		
Woodstock			.....	T	·27	·49	·49	·54	·54	·52	·50	·56	·44	·32	·05	.....		
Lindsay			.....	·03	·12	·39	·49	·50	·50	·51	·49	·50	·31	·21	·13			
Barrie			T	·25	·42	·46	·51	·53	·54	·55	·54	·55	·54	·47	·48			
Toronto			.....	·13	·40	·48	·55	·49	·51	·54	·58	·58	·57	·50	·31	·08		
Kingston			.....	·06	·28	·42	·52	·55	·60	·61	·55	·51	·39	·35	·09			
Ottawa			·08	·27	·36	·49	·47	·55	·57	·63	·57	·47	·47	·48	·39	·05		
Montreal			.....	·02	·31	·47	·50	·49	·51	·53	·56	·46	·44	·24	·04			
Quebec			·01	·18	·37	·39	·42	·45	·53	·54	·52	·56	·50	·43	·24	·02		
Sherbrooke			·19	·46	·57	·58	·59	·60	·63	·61	·62	·59	·55	·50	·41	·09		
Fredericton			·05	·21	·25	·28	·26	·33	·35	·43	·41	·41	·45	·43	·36	·06		
Charlottetown			·04	·26	·38	·49	·46	·45	·58	·51	·51	·58	·53	·37	·23	·04		
Truro		....	.....	·10	·26	·31	·34	·38	·44	·43	·39	·37	·35	·25	·13	.....		
Dunvegan, Alta			·19	·38	·53	·59	·66	·71	·65	·59	·54	·63	·59	·46	·28	·16	....	

—	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Halleybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottet'wn.	Truro.	Dunvegan, Alta.
Registered duration in hours.	180	188	181	115	196	188	189	190	218	212	239	143	186	206	239	.	227	152	.	141	127	167	172	118	175	154	155	210	129	163	112	209
Percentage of possible duration	41	46	43	28	47	45	45	47	50	51	57	33	44	51	62	.	55	37	.	35	31	41	43	36	43	43	38	51	32	40	27	48
Difference from average	+4	+3	.	+4	—	—	—	—	—	—	.	.	−7	+12	—	.	+6	—	.	−8	.	4	6	−12	.	−6	.	.	−16	.	.	.
Maximum percentage in one day	89	91	92	71	81	91	76	86	96	98	90	80	87	89	95	.	94	93	.	83	89	89	92	83	94	91	87	98	94	91	83	94
Date of maximum	30	23	23	15	23	23	20	14	15	4	23	7	19	21	16	.	28	3	.	12	12	2	12	1	3	1	15	28	29	17	3	16
No. of days completely clouded	6	3	6	11	1	0	3	2	0	1	1	6	0	3	1	.	6	8	.	7	9	4	5	10	3	5	5	6	9	6	9	3

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeble brillaney.

1. Haileybury IV, Dawson I, Quebec IV, Minnedosa III, Truro III, Halkirk, Red Deer I Foxleigh, Threehills Creek II, Waitefield IV, Salmon Arm II, Chilcotin III, Aitkensville IV, Birma IV, Madoc II, Bruce Mines IV, Schreiber IV, Lake Talon IV, Sion IV.

2. Haileybury IV, Quebec IV, Fredericton IV, Harmattan IV, Waitefield IV, Fruitvale, Okanagan Mission, Chilcotin III, Foxleigh, Aitkensville IV, Haliburton, Madoc III, St. Stephen I, Cartwright IV, Wolfville IV.

3. Haileybury IV, Halkirk, Red Deer IV, Waitefield II, Nicola Lake, Kakabeka Falls IV, Wolfville IV.

5. Dawson IV, Waitefield IV.

7. Dawson IV, Hillsdown IV, Halkirk, Threehills Creek IV, Waitefield IV, Sion II.

8. Gravenhurst IV, Threehills Creek IV, Waitefield IV, Aitkensville IV.

10. Dawson IV.

11. Gravenhurst IV, Toronto III, Quebec IV, Threehills Creek II, Esterhazy IV, Aitkensville IV, Aweme I, Bruce Mines IV, Haliburton, Lucknow IV, Madoc IV, Schreiber IV, Emsdale IV, Cartwright IV.

12. Haileybury IV, Threehills Creek III, Fairview, Kenora IV, Kakabeka Falls I, Shelburne, Loch Sloy.

13. Fairview, Bruce Mines IV.

14. Fairview, Sion IV.

15. Sion IV.

16. Quebec III, Fruitvale, Sion IV.

17. Hillsdown III, Halkirk, Waitefield II, Threehills Creek I, Princeton IV, Okanagan Mission, Nicola Lake, Melfort, Oliver, Grenfell II, Pense III, Chaplin I, Estevan IV, Aitkensville I, Aweme I, Cartwright I.

18. Harmattan I, Waitefield II, Esterhazy III, Grenfell II, Aitkensville III, Loch Sloy, Wolfville II.

19. Minnedosa I.

22. Esterhazy II, Aitkensville III, Aweme II.

23. Aitkensville III.

25. Haliburton.

26. Fruitvale, Salt Spring Island, Summerland, Okanagan Mission, Nelson, Chilcotin III, Westport, Esterhazy IV, Aitkensville IV, Cartwright IV, Loch Sloy.

27. Haileybury II, Gravenhurst IV, Truro IV, Threehills Creek III, Grenfell IV, Aitkensville IV, Westport, Kenora III, Kakabeka Falls IV, Schreiber IV, Loch Sloy.

28. Quebec IV, Halifax IV, Waitefield II, Threehills Creek III, Melfort, Waseca, Sion IV, Loch Sloy.

29. Dawson I, Charlottetown IV, Fredericton II, Truro II, Chilcotin II, Melfort, Grenfell II, Pense III, Aitkensville IV, Aweme I, Sion III, Cartwright IV.

30. Hillsdown IV, Waitefield III, Threehills Creek III, Okanagan Mission, Melfort, Oliver, Meota IV, Aitkensville IV, Kakabeka Falls IV, Schreiber III, Chicoutimi, Wolfville IV.

Thunder recorded :

1. Muenster.
3. Almasippi, Oakbank, Point Clark, Cartwright.
4. Winnipeg, Norquay, Gretna.
5. Port Arthur, Kakabeka Falls, Schreiber, Georgetown.
6. Brome, Chicoutimi.
7. St. John, Charlottetown, Point Lepreaux, Point Escuminac.
8. Halifax.
9. Lanigan, East End.
10. Crescent Lake.
11. Saskatoon, Chaplin, Foxleigh, Point Clark, Meaford, Owen Sound, North Bruce, Wesley, Elm How.
12. Scott, Chaplin, Aweme, Cartwright.
13. Minnedosa, Hillview, Almasippi, Oakbank, Morden, Aweme, Kenora, Bardo, Norquay.
14. Gravenhurst, Winnipeg, Port Stanley, Norquay.
15. Birnam, Kakabeka Falls.
19. Ottawa, Montreal, Kingston, Rossland, Okanagan Mission, Nelson, Madoc, Westport, Dorenlee.
20. Grand Manan, St. John, Indian Head, Crescent Lake, Arden, Cartwright.
23. Georgetown.
24. Ottawa, North Gower.
25. Toronto.
26. Haileybury, Gravenhurst, Ottawa, Southampton, Parry Sound, Okanagan Mission, Agincourt, Midland, Madoc, Montague, Lake Talon, Uplands, Westport, Emsdale.
27. Fredericton, Sion.
28. Esterhazy, Crescent Lake, Moncton, Princeton.
29 Southampton, Toronto, Stony Creek, Brantford, East Toronto, Hamilton, Lucknow, Schreiber, Paris, North Bruce, Georgetown, Wesley.
30. Ottawa, Montreal, St. John, Quebec, Frederieton, Brome, Chicoutimi, Shawinigan Falls, Lake Edward, Point Lepreaux, St. Stephen, Sussex, Dutton.

FORECASTS FOR APRIL, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1149. These were divided as follows : –

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	76	58	15	3	86 2
Saskatchewan	76	63	10	3	89 5
Manitoba	79	63	13	3	88 0
Lake Superior	102	73	26	3	84 3
Georgian Bay	108	79	24	5	84 3
Ottawa Valley	85	67	13	5	86 5
Upper St. Lawrence	85	65	14	6	84 7
Lower Lakes	108	81	24	3	86 1
Lower St. Lawrence	107	79	19	9	82 7
Gulf	108	88	18	2	89 8
Maritime Provinces West	108	80	22	6	84 3
Maritime Provinces East	107	82	20	5	86 0
Total	1149	878	218	53	85 9

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto.
April, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. MAY, 1910. No. 5.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

Night frosts occurred over the greater part of British Columbia from the 1st to the 4th, and in the upper country on the 15th and 22nd also. The day temperatures, however, were high throughout the month. This was especially the case in the Okanagan Valley and the Kootenay district, where temperatures considerably exceeding 80° were registered on several days. Along the coast-line north of Vancouver Island, the mean temperature of the month was either average or slightly below; but in the interior and on Vancouver Island the mean temperature of the month was above the average of the same month for the preceding 20 years by from 1° to 4°. The hottest period occurred about the 21st and 23rd, when temperatures between 88° and 95° were registered in the country east of the Fraser River and as far north as the Thompson. The total precipitation for the month was light, much less than usual falling over the greater extent of the country. Several good showers, however, fell in the interior, notably during the night of the 9th, and at the end of the month the reports from the fruit country were encouraging.

In southeastern Alberta the normal mean temperature of May was exceeded by 3° to 4°, but in southwestern Alberta by only 2°, while as far north as Edmonton very little more than the average was reported. The frosts for the first three or four nights were heavy, but maximum temperatures were fairly high at all stations during the first two weeks and exceeded 80° at many places during the last two weeks. The highest temperature reported in the province was 88°, which occurredat Lethbridge Experimental Farm on the 15th. There was no precipitation during the first six days and the rainfall was exceedingly scanty until the 14th, after which date copious showers occurred at intervals until the 25th, when dry warm weather continued till the end of the month. The total precipitation was below normal at many places but reports received at the end of the month stated that the crop prospects were very good.

There were heavy frosts in Saskatchewan on the 1st and 2nd, and on the 11th and 12th, but on the 8th and 26th temperatures between 75° and 85° were recorded. The 15th and 16th were cool days the maximum not exceeding 50° in many places in eastern Saskatchewan. The mean temperature of the month was from 2° to 4° below the twenty year average in the eastern portion of the province, but the deficiency decreased in a westerly direction, while in the extreme west of the province the mean was approximately normal. The total precipitation was somewhat below normal in the central districts but elsewhere was generally well above. The first two weeks were very dry but during the latter half of the month there were frequent showers. On the 15th, 18th and 20th scattered snow-falls occurred, the snow melting very rapidly. About the 28th thunderstorms with light hail were reported from several localities. The precipitation during the latter half of the month left the crops in excellent condition. Battleford reported at the end of the month that the wheat was "a month ahead of last year".

The mean temperature of the month was from 2° to 3° below the normal in Manitoba. There were heavy frosts on the first two days and on the 12th and 13th. The 15th to 20th were cool days with maximum temperatures ranging between 40° to 50°. The warmest day of the month was the 27th, when a temperature of 85° was exceeded at many stations. Snow fell on the 1st in a few districts and light rain occurred in the Dauphin district on the 7th and 8th; but generally speaking, the first two weeks

were very dry. During the remainder of the month showers or flurries of melting snow were frequent, especially between the 14th and 21st. The total precipitation was, however, slightly less than the normal amount for May. The grain was reported in good condition at the end of the month.

In Ontario the mean temperature of the month was from 1° to 3° below the normal over the greater part of the province, but in the Kawartha Lakes region the difference from normal was approximately 4°. Sharp frost occurred several times during the month. Ice was formed on the 4th, 5th, 6th, 11th, 14th, 15th and 16th. Maximum temperatures were not higher than 65° at most places until the 18th, when a warmer period began. Temperatures of 70° were recorded between the 20th and 24th and at several places 80° was exceeded on the 28th. Light snow fell in the Rainy River district on the 1st and in the Nipissing district on the 12th. Light rain was recorded frequently during the month, but except in the central counties of the Peninsula, the normal amount for May was not exceeded to any extent, although a small excess was recorded locally in Muskoka and Algoma. Elsewhere in the province the total amount was less than normal. The crops were in good condition at the end of the month, although in the fruit districts the cherries, plums, and peaches were reported to be a little backward on account of the cool weather.

In western Quebec, in the districts lying to the north of the Ottawa River, and also in the county of Brome and adjacent counties, the mean temperature of the month was between 1° and 2° below the normal. But at Montreal it was approximately normal, and eastwardly along the St. Lawrence the positive deviation from normal increased to 3° at Father Point. The warmest period was from the 25th to the 29th, 75° being exceeded between those dates. In northern Quebec and in the Gulf counties the amount of precipitation was below the normal, but in the counties along the upper St. Lawrence the normal was well exceeded. Farming operations were well advanced at the end of the month and pasture-lands in excellent condition.

In northern New Brunswick the amount of precipitation was well above the normal, rain having fallen on from 10 to 12 days. On the Bay of Fundy, although rain was recorded on from 10 to 13 days, the amount was not in excess of average. Elsewhere in the province the amount was less than normal, having been recorded on from 7 to 9 days. The mean temperature ranged from average to 1° above.

In Nova Scotia the total precipitation was either normal or below, except at Halifax, where rain fell on 15 days and the total amount was about 10 per cent. above the normal. Over the greater part of the province the mean temperature was between 1° and 2° below the normal. The month was, for the most part, dull and cloudy.

In Prince Edward Island the mean temperature and total precipitation were both slightly below the normal.

Throughout the Maritime Provinces vegetation was well advanced at the end of the month.

ATMOSPHERIC PRESSURE.

The average value of the mean atmospheric pressure for May was exceeded in British Columbia and the Western Provinces, and also over Ontario, with the exception of the Ottawa Valley and the greater part of New Ontario, where the normal was not quite reached. In Quebec and the Maritime Provinces values were subnormal.

The range of departure from normal was 0·17 of an inch, the extremes being —0·04 of an inch at Sydney, N. S., and + 0·13 of an inch at Edmonton, Alta.

HIGH AREAS.

Six areas of high barometric pressure were charted during May, but anti-cyclonic activity was mainly confined to the western part of the Continent.

The areas, as a rule, passed from the far North West, southeastward, three of them crossing the Lake Region, and the majority were of comparatively slight intensity.

LOW AREAS.

Eleven areas of low pressure were sufficiently well defined to admit of their paths being traced. One first appeared in the Yukon Territory; one on the northern British Columbian coast, one in the interior of British Columbia, three in Alberta, three in the Pacific States, one in the vicinity of

Lower California and one in Texas. The general course of the areas was towards the Great Lakes, thence to the Maritime Provinces and Newfoundland. The systems were mostly of minor intensity and their transit was seldom marked by any very strong winds or any excessive precipitation.

WINDS.

In British Columbia, on Vancouver Island and over the Mainland, the direction although often variable favoured somewhat the south and west, with five days with strong and twelve with fresh breezes.

In Alberta the direction was variable, with seven days with strong and ten with fresh breezes.

In Saskatchewan the north and west directions were the most general, with nine days with strong and thirteen with fresh breezes.

In Manitoba the north and west directions predominated, with seventeen days with strong and five with fresh breezes and three gales.

In the Lake Region the direction was fairly evenly divided between all quarters, with seven days with strong and twelve with fresh breezes and one moderate gale.

In the Ottawa and Upper St. Lawrence Valley the south and west directions were the most in evidence, with sixteen days with fresh, but with few strong breezes and one moderate gale.

In the Lower St. Lawrence Valley and the Gulf the direction was largely northerly to easterly, with fourteen days with strong and seven with fresh breezes

In the Maritime Provinces the direction was variable, with eleven days with strong and nine with fresh breezes,

Warnings were issued to Lake Stations for the gale which was experienced between the 17th and 18th.

TEMPERATURE.

Along the coast line of British Columbia, north of Vancouver Island, the mean temperature of the month was either average or slightly below, but on Vancouver Island and the interior the mean was above the normal by from 1° to 4°. In southeastern Alberta the normal mean temperature of May was exceeded by from 3° to 4° ; but in southwestern Alberta by only 2°, while as far north as Edmonton very little more than average was reported. In the eastern portion of Saskatchewan was below the twenty-year average by from 2° to 4°, but the deficiency decreased westwardly to approximately normal in the extreme west.

The mean of the month was from 1° to 3° below the normal in Manitoba and Ontario, except in the Kawartha Lakes district where the departure from normal was apparently more pronounced. From Montreal eastward along the St. Lawrence, the mean temperature was either normal or above, the excess reaching 3° in the Gulf counties.

In New Brunswick the mean temperature ranged from normal to 1° above ; but in Nova Scotia and Prince Edward Island was from 1° to 2° below.

The highest and lowest temperatures recorded in each Province during the month of May, 1910, were :

	HIGHEST.	LOWEST.
British Columbia,	94° at Kamloops on the 22nd.	16° at Glacier on the 2nd.
Alberta,	88° at Lethbridge on the 15th.	10° at Harmattan on the 1st.
Saskatchewan,	86° at Moose Jaw on the 7th.	5° at Esterhazy on the 1st.
Manitoba,	89° at Aweme on the 27th.	9·5° at Moose Horn Bay on the 2nd.
Ontario,	83° at Chatham on the 21st.	14° at White River on the 3rd.
Quebec,	81° at Shawenegan Falls on the 29th.	14° at Clarke City on the 1st.
New Brunswick,	79° at Chatham on the 23rd.	21° at Dalhousie on the 4th.
Nova Scotia,	78° at Sydney on the 25th,	25° at Port Hastings on the 6th.
P. E. Island,	71° at Charlottetown on the 27th.	32° at Hamilton on the 5th.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month was considerably above average in British Columbia, considerably below average in northern Saskatchewan, nearly average in Manitoba and below average elsewhere.

PRECIPITATION.

The normal precipitation for May was exceeded in the central counties of the Ontario Peninsula, the counties along the Upper St. Lawrence, in Northern New Brunswick, in the vicinity of Halifax, and locally in Muskoka and Algoma. Elsewhere in the Dominion the precipitation was light.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MAY, 1910

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean mile per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION Amount	Difference from average.	Heaviest fall in month	No. of days with 0·01 or more	No. of days with 0·10 or more	No. of days with 0·50 or more	No. of days with 1·00 or more
BRITISH COLUMBIA—				in.	in.	in.	in.	°	°																														
Alberni (Beaver Creek)	49	15	124	19	380																																		
Agassiz	49	14	121	31	52			56·8	+ 1·3	18	84·0		31		31·0	7	12	31·9																					
Atlin	59	35	133	38	2240	30·03	30·36	29·52	0·84		42·1		3	66·0		24		25·0		13	15·9																		
Barkerville	53	2	121	35	4180	30·06	30·45	29·63	0·82		43·8	− 0·8	22	75·0		24		24·0		1·8	22·1			6		2		0		0		1		0		11		12	8·1		
Bella Coola	52	10	126	51	150			52·2		0	0·0	12	79·0	23	25			29·0		1	25·6																		
Babine Lake								44·6			2·9	0			25			22·0		2	26·5																		
Chilcotin (Big Creek)	51	40	123	0	3100			48·4			7·7	9	0		24			23·0		8	31·9																		
Cranbrook	49	30	115	50				52·7			1·8	6	0·0		24			23·0		3	35·4																		
Clayoquot	49	11	125	47	10			50·8	+ 0·9	11	72·0		21		33·0			1·9	0·0																				
Cowichan (Tzouhalem)	48	25	123	42	170			55·4			4·7	5·0		3		37·2		1·5	24·0																				
Enderby	50	32	119	7	1180			57·1			8·8	8·0	0	23	31		26·0		14	23·8																				
Fairview								65·1			1·8	8·0					37·0		1	31·0																				
Fruitvale								55·2			1·9	0·0			23		28·0		1	36·0																				
Glacier	51	14	117	29	4072			41·2	− 1·1	11	75·0		25		16·0			2·1	9·5																				
Golden	51	10	116	55	2550			51·0			7·8	2·0			24		27·0		2	28·4																				
Holberg								49·1			1·0	9·5			23		34·0		1	15·8																				
Hedley	49	35	120	10				56·9			5·8	9·0		31		32·5		25	29·4																				
Hedley (Nickel Plate)								39·2			5·6	9·0		22		19·0		15	21·4																				
Hope								57·8			1·0	6·5		0		35·0		1	28·0																				
Ikeda Bay	52	17	131	7	5			48·1			2·6	3·0	21	22		34·0		1·1	5·0																				
Kamloops	50	41	120	20	1245	29·95	30·12	29·49	0·93		61·9		3·7	15	91·0		22		34·5		4	29·3		15	5	2	3	9	3	3	5	6	18	2	13	62	VI		20	13 S.E.					
Kitamaat	53	39	128	42																																			
Ladner	49	5	123	1				53·4	+ 1·6	11	72·0		22		35·0			1·4	23·3																				
Massett, Q.C.I.	53	58	132	9	30			48·9		0	0·0	12	69·0	21	31			37·0		1	17·3																		
Midway	49	0	118	50	1800																																		
*a*Nanaimo	49	10	123	37	125	29·90	30·30	29·58	0·80		51·9	+ 1·9	10	75·9		31		35·9		1	21·0		72	4	2	0	8	8	30	0	3	2	4	1	93	IX		30	18 S.W.					
Nicola Lake	50	9	120	39	2120			53·1	+ 1·8	15	81·0	23	24		31·0			2·2	5·1																				
North Nicomen	49	12	122	2	50			56·6	+ 1·8	18	79·0	21	31		26·0			1·2	3·8																				
New Westminster	49	13	122	54	330	30·08	30·50	29·72	0·78		55·2	+ 1·1	21	75·7		31		31·0		1	20·9		76	5	3	0	2	13	2	3	19	1	6	13	62	V		20	18 S.W.					
Needles																																							
Nelson	49	29	117	21	1760			53·3			7·8	2·0		7		30·0		1·3	0·7																				
Okanagan Mission (Kelowna)	49	52	119	29	1200			57·1	+ 2·0	12	85·0		22		30·0			1·2	7·0																				
Port Simpson	54	34	130	26	26	30·06	30·41	29·49	0·92		47·7		1·3	23	68·9		22		33·4		1	14·1		93	7	11	1	2	13	7	5	7	1	9	11	62	VI		22	25 S.W.					
Princeton	49	29	120	29	1650			53·5	+ 1·5	18	85·0	23	30		25·0			1·3	5·3																				
Penticton								57·0			4·8	6·0		21		35·0		1·2	27·5																				
Pemberton Hatchery								54·3			1·2	8·3	5	21		29·0		1·1	5·8																				
Prince Rupert	54	18	130	18																																			
Quesnelle	52	59	122	30	1700			51·8	+ 0·4	13	88·0		25		22·0			1·3	1·5																				
Revelstoke	51	0	118	6	1456			51·0	+ 1·9	12	86·0		23		29·0			1·2	9·7																				
Rossland	49	5	117	48	3100						7																												
Ruskin (Stave Falls)	49	16	122	23	125			56·8			1·8	0·0	22	30		35·0		3	28·2																				
Stuart's Lake (Fort St. James)	54	28	124	12	2280																																		
Salmon Arm	50	42	119	35	1245			58·2			8·9	1·0	22	23		31·0		1·3	0·9																				
Steveston (Garry Point)	49	21	123	17				53·4	+ 1·2	15	72·0		23		33·0			15	19·0																				
Swanson Bay								44·7			2·6	5·0		9		31·0		1·3	19·6																				
Salt Spring Island	48	50	123	20				51·5			1·7	5·0		31		38·0		1	21·9																				
Summerland	49	37	119	40	1100			59·0			3·8	6·0	22	31		36·0		1	21·8																				
Tobacco Plains (Elko)	49	1	115	5	2681			57·3	+ 1·5	14	87·1		24		31·0			1·2	7·3																				
*a*Tranquille	50	41	120	20		28·77	29·22	28·45	0·77		59·6		2·8	9·5		22		36·0		1·3	28·9		45	5	1	4	6	1	3	3	13	25	17	21	93								
Vernon (Coldstream Ranch)	50	14	119	15	1575			57·6	+ 3·1	16	88·0		31		30·0			15	29·7																				
Victoria	48	24	123	19	85	30·08	30·49	29·71	0·78		54·8	+ 1·5	18	74·1		21		38·7		1	19·2		70	4	0	3	1	2	2	13	13	14	3	11	62	IX		28	11 W.					
Vancouver	49	17	123	5	136	30·10	30·35	29·74	0·61		56·5	+ 2·5	10	70·0		22		36·3		1	5·4		62	4	2	0	0	10	11	1	11	12	10	1	62	VI		18	11 S.W.					
Winter Harbour	50	32	128	3				50·1			5·5	6·8	0	24		34·0		1·4	16·2																				
Wilmer								53·6			1·4	6·3	0	23		26·0		15	35·5	*																				

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MAY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure.				Temperature.							Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from									Velocity of wind.			Precipitation									
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in a month.	Days with 1 cent or more.	No. of days with snow.	No. of days with hail.	No. of days with thunder.	No. of days with fog.	
				in.	in.	in.	in.																																
SASKATCHEWAN—*Con.*																																						
Scott (Hearts Hill)																																						
Waseca	53	6	100	29				48·3		2	79·0		25	15·0	1 25·2				1	1	6	8	3	1	5	6	0	31				1·32		0·82	1	27	2	0	0	
Yorkton	51	11	102	29				63·4		2	77·0		28	10·0	19 27·2																		1·32		1·70	6	25	0	0	0	
MANITOBA																																						
Almasippi	49	11	99	20				48·0		8	87·0		25	15·0	2 28·4																		1·69		0·80	7	24	3	0	0	
*a*Aweme (St. Alban's)	49	12	99	33	1180	28·77	29·17	28·27	0·80	48·9	− 2·6	23	89·0		16·0																		1·62	+ 0·13	0·63	10	11	3	0	0	
Brandon	49	51	99	57	1176					46·1	− 2·9	23	81·1		11·0		5	4	5	21	7	5	9	13	5	28	0	93				1·66	+ 0·21	0·28	7	24	1	0	0	
Birtle	50	25	101	4	1703																																			
Berens River	52	18	97	23	710					42·1		3	66·0		27	19·0	2 16·8				7	5	7	2	17	0	13	11	0	62				1·98		1·01	6	24	0	0	0	
Carberry	49	52	99	20	1258							6																					1·58			4	23	0	0	0	
Carman	49	31	98	0	872							5	85·0		28	10·0	12																1·55			6	25	0	0	0	
Cypress River	49	33	99	3	1232																																			
Hillview	49	55	100	33	1100					47·7	1·5	24	82·0		27	19·0	2 27·6																1·63	0·08	0·61	7	24	3	0	0	
Minnedosa	50	15	99	50	1620	30·03	30·18	29·13	1·05	46·6	3·1	27	81·5		27	15·1	12 30·1		5	6	8	4	7	3	4	3	1	10	22	62				1·67		0·78	10	21	3	0	0	
Morden	49	11	98	6	978					48·9		8	85·0		28	19·0	2 27·3																1·12		0·18	10	11	0	0		
Moose Horn Bay (Aitkensville)																																						
Oakbank	49	57	96	42	740					45·4		1	78·2		28	9·5	2 23·6				13	8	5	11	3	6	2	8	6	62				1·85		0·80	10	21	11	1	0	
Pipestone	49	31	100	58	1100					47·6	− 0·9	15	88·5		20·0		2 23·9				10	1	0	2	3	7	1	7	0	31				1·76	+ 0·19	0·62	6	25	0	0	0	
Portage la Prairie	49	57	98	17	830								76·0																											
Portage la Prairie (2)	49	58	98	17						48·2	3·1	22	85·0		29·0	19·0	11 23·7																								
Pierson	49	11	101	5	1531					48·6		5	86·0		28	19·0	12 21·2																1·72		0·87	8	23	0	0	0	
Stony Mountain	50	10	97	11	803					47·6		6	83·0		28	13·0	12 29·3																1·10		0·75	3	28	0	0	0	
Swan River	52	6	101	15	1112					47·7	3·7	28	87·0		28	15·0	29 30·6				4	5	0	3	13	10	5	22	0	62				0·82		0·25	3	28	0	0	0	
Treherne	49	39	98	40	1212					46·7		2	78·0		26	16·0	1 26·6																2·03		1·12	5	26	0	0	0	
Virden	49	51	100	55	1411					47·1	− 1·5	15	86·0		27	17·0	12 26·3																1·69		1·26	6	24	2	0	0	
Winnipeg	49	53	97	7	760	30·05	30·18	29·48	1·00	46·5		9	83·0		26	11·0	2 29·0																0·88		0·40	3	28	0	0	0	
								48·9	2·2	36	81·8		27	19·3	12 27·1			5		7	10	1	11	11	2	2	16	2	62				1·65		0·59	11	30	3	0	0	
ONTARIO																																						
Alton	43	51	80	5	1250																																			
Aurora	43	57	79	24	886					50·2		2	75·8																				2·98	0·18	1·06	7	24	0	0	0	
Agincourt	43	47	79	16	590					50·9	3·8	16	78·		28	30·3	15 18·9		5	4	1	11	13	8	6	11	12	25	1	93				2·56	1·7	1·01	9	22	2	1	1	
Barrie	44	23	79	41	830					49·9	1·1	31	72·2		28	28·9	15 19·2		5	2	11	3	4	10	6	5	2	35	15	93	1·6	6	NNW	3·09	0·58	1·56	9	23	1	1	1	
Beatrice	45	8	79	20	800					48·9	2·7	35	71·0		32	25·0	15 22·9		5	5	18	0	0	3	19	9	1	13	30	93				3·11	+ 1·46	0·88	9	22	1	1	0	
Bruce Mines	46	18	83	55	595					47·3	2·3	12	72·0	27	28	27·0	5 11 21·2																3·51	+ 1·31	0·65	11	20	2	1	3	
Birnam	43	2	81	55	600					50·4	1·6	25	71·3		28	28·4	10 18·5				21	2	3	6	10	4	5	5	3	62				3·65	+ 0·80	0·99	12	19	1	3	0	
Brantford	43	10	80	21	750					53·1	1·8	30	80·0		21	30·0	14 21·8																3·49	+ 1·47	1·34	11	20	0	2	3	
Bloomfield	43	59	77	21	260					51·6	2·2	11	73·0	21	32	30·0	5 15 18·9																1·29		0·70	7	24	0	1	1	
Bancroft	45	1	77	50						50·4	1·0	21	77·0		28	24·0	11 25·9																1·48	+ 1·30	0·83	3	28	0	0	0	
Copper Cliff	46	30	80	59						49·3		5	79·0		28	28·0	11 27·1																3·83		1·25	8	23	0	0	0	
Clinton	43	32	81	35						48·6		7	75·0		23	25·0	15 19·7				12	5	6	7	8	4	3	16	1	62				3·38		0·92	11	17	0	2	1	
Coldwater	44	38	79	40	690																																			
Cockburn Island	45	57	83	18	610																																			
Cottam	42	3	82	15	606					51·2			80·0		2	25·0	5 24·1				21	1	2	11	12	8	7	2	0	62				1·63		1·25	6	25	0	1	0	
Chatham	42	23	82	12	590					54·1			83·0		24	29·0	6 23·9																1·76		1·85	10	21	0	0	0	
East Toronto	43	35	79	18						50·8		1	81·0		28	30·0	11 19·9																2·3		1·30	11	20	0	2	0	
Elora	43	41	80	24	1271					49·1	2·7	13	78·0		32	26·0	15 22·8																2·49	− 0·25	0·91	10	21	0	0	0	
Gravenhurst	44	54	79	20	770					48·7		3	79·0		20	21·0	7 24·3				23	1	5	6	11	3	11	17	10	93				3·21		0·72	10	21	1	1	0	
Guelph	43	33	80	16	1050					51·6		2	82·0		32	30·0	15 24·0																2·74		1·05	13	18	0	0	0	
Grimsby					282	29·71	30·10	29·25	0·85	52·3		1	78·0		29	33·0	13 21·0																2·80		0·80	12	19	0	1	0	
Huntsville	45	19	79	8																																				
Haileybury	47	29	79	39	687	29·96	30·09	29·35	1·25	49·1		17	82·7		28	24·0	11 20·1																3·37		0·79	12	19	6	0	0	
Hamilton	43	16	79	51	363					52·5		31	80·0		28	35·0	13 17·2																3·27		1·61	9	22	0	1	0	
Haliburton	45	1	78	28	1050					50·1	− 3·6	21	77·0		28	32·0	6 28·7																2·58	+ 0·20	0·80	6	25	2	0	0	
Kenora	49	48	94	32	1162					40·5		11	71·9		11	29·0	2 13·7																					8	1	0	

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MAY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.				TEMPERATURE.									Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM									Total number of observations.	VELOCITY OF WIND.			PRECIPITATION.			Days with .01 or more.	No. of fair days.	No. of auroræ.	No. of thunder storms.	No. of fogs.
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observation	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.		Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in month.					
NEW BRUNSWICK—																																						
Bathurst	47 39	65 42	15					50·1	0·0	26	79·0	23	30·0	6	19·5				6	3	8	17	3	0	13	13	3	2	62				1 37	+ 1 55	1 53	12	19	0	0	0
Chatham	47 3	65 29	21	29·96	30·39	29·32	1·07	50·1	0·6	36	79·0	23	30·0	6	19·5				6	3	8	17	3	0	13	13	3	2	62				1 37	+ 1 55	1 53	12	19	0	0	0
Dalhousie	48 1	66 22	38					47·0	+ 1·3	29	70·0	26	27	21·0	4	16·3				0	3	11	3	0	2	7	9	2	31				3 66	— 1 03	0 80	7	24	0	0	0
Fredericton	45 57	66 36	164	29·96	30·38	29·38	1·00	50·6	0·6	37	76·0	25	28·0	6	22·9			71	6	6	7	17	13	10	10	9	5	21	1	93	8·0	17	3 10 W	2 51	— 0 66	0 52	9	22	0	1	1
Grand Manan	44 47	66 46	19	29·96	30·37	29·07	1·30	49·6		26	67·6	27	31·0	6	14·5				6		3	11	4	6	9	13	4	9	0	62				1 45	— 2 54	0 53	7	24	1	2	10
Moncton	46 9	64 46	50					50·1	+ 0·4	13	76·0	25	28·0	7	15·2						2	1	3	6	1	3	13	0	31				1 80	— 0 78	0 80	9	22	0	0	0
*Point Lepreaux	45 1	66 28	50					45·9	+ 1·1	32	68·0	19	30·0	4	—				5	9	3	6	13	7	31	10	6	0	78				3 20	— 0 88	0 85	7	24	0	1	12
St. John	45 17	66 4	70	29·95	30·37	29·30	0·98	49·0	+ 0·5	37	70·0	28	29·5	6	13·7				6		4	11	9	11	17	4	1	5	3	62				3 49	— 0 12	0 84	13	18	0	1	5
St. Stephen	45 11	67 16	35					51·1	+ 2·0	13	72·0	23	28·0	7	12·9																		3 18	+ 0·91	0·65	9	22	0	0	0
Sussex	45 38	65 38	60					50·8	+ 1·7	13	71·0	22	23·0	8	23·0				6		7	1	1	1	4	1	2	10	30				1 80	— 1 30	1 35	6	11	0	1	0
NOVA SCOTIA—																																						
Halifax	44 39	63 36	88	29·97	30·35	29·41	0·91	49·9	0·6	36	70·2	27	30·7	18	17·2				7		4	10	5	9	7	11	10	6	0	62				3 32	+ 0 35	1 04	17	16	0	5	6
Port Hastings	45 38	61 12	45					47·6	0·3	19	76·0	26	25·0	6	21·0						0	5	0	6	7	8	0	5	0	31				2 63	1 46	0 58	6	25	0	0	0
Parrsboro'	45 23	64 19	10					48·9	+ 0·6	14	70·0	26	28·0	16	21·0																		1 26	—	0 26	5	26	0	0	0
Sydney	46 10	60 10	35	29·53	30·32	29·41	0·88	48·2	— 2·1	36	78·0	25	29·4	1·8	17·6				8		9	4	3	7	4	4	21	6	4	62				3 08	— 0 15	0 74	11	20	0	1	2
*Sable Island, E. Point	43 58	59 46	25					47·1	+ 1·0	28	59·0	25	38·0	6	—						0	16	0	21	0	38	0	18	0	93				3 30	+ 0 85	1 54	15	7	0	0	12
Truro	45 22	63 18						50·5	—	36	77·3		26·4	17	21·8						15	12	9	4	16	18	11	6	2	93				2 37	—	0 46	13	18	0	1	0
Windsor	44 59	64 6	90					49·5		28	72·0	25	27·0	17	18·5																		2 57	—	0 87	10	21	0	1	0
*Whitehead	45 15	61 8	20					43·5	+ 1·7	27	55·0	15	35·0	6	—				12		5	15	16	6	33	1	4	1	93				2 51	+ 0 47	0 75	6	25	0	0	15
Yarmouth	43 50	66 2		29·97	30·36	29·44	0·92	49·7	1·5	30	69·7	30	31·1	6	15·8				6	12	7	1	10	1	15	9	11	6	2	62				1 56	— 2 10		12	19	0	0	10
P. E. ISLAND—																																						
Charlottetown	46 14	63 10	38	29·97	30·37	29·37	1·00	49·5	— 1·2	35	71·0	27	33·0	5·6	15·6				7		6	13	9	6	19	5	3	1	0	62				2 38	— 0 38	0 62	13	18	0	1	3
Hamilton	46 25	63 48						49·0	+ 2·2	12	71·0	24	26	32·0	5·7	18·3					7	2	5	1	7	6	2	1	0	31				1 58	—	1 03	7	24	0	0	0
NEWFOUNDLAND—																																						
*Amour Point	51 28	56 51																																				
Burin	47 0	55 10	27	30·05	30·53	29·46	1·07	43·9	—	2	70·0	26	30·0	1·3	13·1				7		2	18	12	6	5	8	7	2	2	62				2 85	— 0 61		19	12	0	0	10
*Cape Norman	51 38	55 52																																				
*Point Rich	50 42	57 25	35					41·5	+ 2·8	26	62·0	29	35·0	4·5	—						6	10	31	1	11	29	4	1	0	93				4 52	+ 1 98	1 00	8	23	0	0	2
Point aux Basques	47 35	59 10	27	29·98	30·39	29·44	0·95	43	—	2	61·5	24	28·5	4	10·7				8	18	1	6	30	3	2	3	11	1	1	62				3 85	—	0 77	20	11	0	0	11
St. John's	47 34	52 42	12	29·98	30·99	29·46	1·53	47·5	— 1·8	37	75·0	25	27	30·0	1·2	15·4			7		11	10	3	4	8	15	4	0	4	62				2 23	— 0 96	0 53	17	14	0	0	12
BERMUDA—																																						
Prospect	32 17	64 30	151	30·16	30·39	29·95	0·43	67·3	—	19	76·8	27	55·4	9	9·5				6		10	5	3	3	20	4	6	9	2	62				5 32	+ 0 83	3 36	11	20	0	2	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING MAY, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni										
Beaver Lake	0·75	6	25	0·26	24 28					
Coquitlam	3·59	9	22	1·03	10					
Denman's Island	1·32	7	24	0·43	28					
Ferguson	1·57	5	26	0·51	25					
Goldstream Lake	1·15	9	22	0·31	28					
Grand Forks	1·21	7	24	0·59	26					
Hornby Island	1·01	5	26	0·31	28					
Jordan River	1·61	10	21	0·46	29					
LittleQualicum(French Creek, V.I.)	0·74	5	26	0·30	11					
Monte Creek	0·63	3	28	0·26	10					Thunderstorm.
Naas Harbour	1·25	14	17	0·19	11					
Sooke	0·90	4	27	0·40	28					Fog 5.
Skidgate	2·88	11	20	0·90	28					
ALBERTA—										
Bardo	0·65	2	29	0·41	27					
Bismark	1·67	5	26	0·60	18					
Bruederheim	1·43	5	26	0·92	28					
Bittern Lake	1·37	8	23	0·49	27					
Brooks	0·27	4	27	0·11	10					
Conjuring Creek	0·22	4	27	0·62	18					
Coutts	1·00	5	26	0·30	11 19					
Dorenlee	0·73	4	27	0·40	18					
Elkwater	1·18	5	25	0·37	14	1·3	3	1·8	15	
Grassy Lake	0·81	2	29	0·50	10					
Jumping Pound	0·15	4	27	0·11	27	0·15	1	0·15	10	
Josephsburg										
Kimball										
Lacombe	1·38	7	24	0·42	26					
Langdon	0·50	3	28	0·35	18	3·0	1	3·0	3	
Loch Sloy	0·74	9	22	0·28	14					Aurora 27. Fog 1
Macleod	1·56	4	27	0·65	10					
Mayton										
Okotoks	0·63	1	27	0·41	12	*	1		8	
Ponoka	1·01	6	25	0·56	18					
Sion	1·67	13	18	0·44	25					
Wabamun										
SASKATCHEWAN—										
Elm How	2·91	4	27	0·61	15	2·2	1	2·2	15	
Hanley	1·09	4	27	0·51	28	3·0	1	3·0	19	
Last Mountain	1·85	2	29	1·20	18	*	1		15	
MANITOBA—										
Cartwright	2·36	9	22	1·36	15					Aurora 12, 24, 27, 30. Thunder 13, 22.
Deloraine	0·47	4	27	0·21	15	0·5	1	0·5	20	Thunder 22.
Gretna	0·75	4	27	0·29	15					
Norquay	1·80	9	22	0·88	16	0·5	1	0·5	1	
Rapid City	1·10	5	26	0·37	16	*	3		15-28	Thunder 30.
ONTARIO—										
Arden	1·75	9	22	0·70	3					Thunder 3, 30.
Deer Park	2·61	10	21	0·54	2					Thunder 1, 23.
Dutton	4·10	7	24	1·50	2					
Emsdale	3·13	9	22	0·76	18					Thunder 9, 23, 29.
Ennismore										
Goderich	3·20	7	24	0·80	30					
Georgetown	2·95	14	17	1·09	2					Aurora 15, 18. Thunder 2, 29. Fog 23.
Grantham	2·25	11	20	0·82	2					
Lansdowne										
MacCue	2·01	8	23	0·89	3					
Orangeville	3·37	7	24	1·05	3					
Princeton	5·68	6	25	2·76	2					Thunder 2.
Sydenham	2·80	6	25	1·10	2					
Strathroy	2·61	9	22	0·81	2					Thunder 22.
Watford	3·32	9	22	0·81	2					
Westport	2·16	8	23	0·83	3					Thunder 2.
Wooler	2·49	7	24	1·48	3					Thunder 2.
Westminster	3·73	5	26	2·04	2	*	1		13	Thunder 29.
Wiarton	3·60	8	23	1·19	23					Fog 2, 20, 21, 22, 23.
Wesley	2·75	11	20	0·89	3	*	1		13	Fog 23. Thunder 23.
NEW BRUNSWICK—										
Point Escuminac	1·89	7	24	0·61	31	5·3	1	3·1	5	Fog 2, 10, 27, 28, 29, 30.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF MAY, 1910.

STATIONS.	Hours Ending																		
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	
Victoria			19	31	39	61	73	68	75	78	78	77	81	82	63	26			
Nanaimo			22	33	37	67	61	66	68	69	69	67	78	75	69	46			
Vancouver		01	39	39	35	58	67	69	69	69	71	68	67	71	61	1	16		
Agassiz				23	15	47	52	60	60	60	63	58	66	45	35	11			
Tranquille			32	39	67	71	67	67	69	71	67	68	71	67	49	10	10		
Summerland		08	16	31	37	60	73	71	67	73	71	61	62	58	54	26			
Kamloops		04	12	19	23	29	71	72	76	73	65	71	70	62	33	28	02		
Edmonton		10	10	26	31	33	55	63	62	63	66	61	60	57	48	27	05		
Lethbridge		07	16	31	68	73	71	76	74	68	69	73	63	60	49	38	05		
Lacombe		05	25	36	62	70	76	79	78	69	71	68	71	62	58	32	12		
Medicine Hat		33	19	61	68	70	73	71	70	66	63	67	62	54	55	04			
Fort Vermilion																			
Battleford			10	30	39	46	38	39	37	35	29	27	25	2	28	16			
Indian Head		03	33	55	61	61	63	65	64	65	59	62	62	57	37	01			
Moose Jaw		16	50	66	69	65	67	61	66	69	69	76	72	65	57	45	16		
Brandon		01	28	57	61	71	76	78	78	78	71	69	55	46	19				
Winnipeg		01	40	61	69	71	68	65	61	63	69	61	55	52	55	36			
Haileybury		02	22	40	40	41	43	48	50	51	49	48	46	46	43	26	03		
Gravenhurst																			
Woodstock			11	27	33	42	45	42	40	32	37	33	37	38	10				
Lindsay			01	08	27	41	52	55	52	41	44	41	37	32	19				
Barrie																			
Toronto																			
Kingston		02	30	48	49	55	63	56	62	50	47	40	36	33	32	23	01		
Ottawa		01	34	45	49	49	56	52	50	51	55	52	45	41	41	17			
Montreal			15	35	37	48	54	48	49	50	43	49	49	41	29	02			
Quebec			19	41	41	45	43	41	55	56	51	51	47	46	42	24			
Sherbrooke		02	27	45	51	46	41	46	52	43	42	41	35	41	36	24	01		
Fredericton																			
Charlottetown		01	20	27	46	42	51	51	53	51	50	51	49	51	47	26			
Truro																			

—	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermillion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetwn.
Registered duration in hours.	270	271	277	188	275	263	279	213	279	281	264		132	252	286	250	230	187		116	210	190	202	195	198	167	187	181	195	193
Percentage of possible duration	39	37	38	10	36	34	38	19	38	37	35		26	32	39	32	33	10		32	36	11	11	12	13	11	10	39	12	12
Difference from average	-18	—	—	-10			—	—	—	—			-22	-6	—	-1	-0	-		10	-11	5	-4	-3	6	10	—		-3	—
Maximum percentage in one day	88	88	91	81	91	91	91	89	96	88	92		76	91	94	79	92	96		89	79	88	90	94	90	91	90	95	91	87
Date of maximum	15	21	21	21	22	15	31	21	21	23	1		31	31	25	11	1	1		27	5	11	5	5	15	5	20	29	16	11
No. of days completely clouded	1	1	1	3	1	2	1	3	3	2	5		1	3	0	1	3	6		12	6	3	3	5	5	3	3	4	8	5

Aurora recorded:—

Where the class of aurora is noted by the observer, it is given. (I), being the brightest, (IV) the feeblest in brilliancy.

1. Halkirk. Aitkensville III, Fort Vermilion.

2. Threehills Creek III, Waitefield IV, St. Albans III, Schreiber IV, Fairfield III, Melfort, Brownhill III, Kenora IV.

3. Spirit River, Waitefield IV, Halkirk. Aitkensville IV. Kakabeka Falls IV, Oliver, Brownhill II, Waseca, Chaplin IV, Crescent Lake IV.

4. Threehills Creek III, Halkirk, Kakabeka Falls III, Melfort.

5. Bruce Mines IV.

6. Aitkensville IV. Kakabeka Falls IV, Gilt Edge III.

7. Spirit River, Melfort III, Minnedosa I, Gilt Edge III.

8. Waitefield IV, Crescent Lake IV, Fort Vermilion.

9. Waitefield IV, Halkirk, Aitkensville IV, Kakabeka Falls III, Haliburton, Melfort III, Kenora IV, Crescent Lake IV.

10. Aitkensville IV, Kakabeka Falls IV, Kenora IV.

11. Threehills Creek IV, Halkirk, Aitkensville IV, Kakabeka Falls IV, Chilcotin IV, Kenora III, Crescent Lake IV.

12. Waitefield II, Hill-down IV, Hillview I, Aitkensville IV, Fairfield II, Melfort III, Brownhill II, Foxleigh, Estevan I, Winnipeg IV, Kenora IV, Crescent Lake II, Barrie III.

13. Threehills Creek IV, Spirit River, Halkirk, Kakabeka Falls IV, Oliver, Kenora IV.

14. Melfort IV, Minnedosa II.

15. Waitefield IV, Georgetown IV.

17. Aitkensville IV, Kenora III.

18. Agincourt II, Stony Creek I, Kakabeka Falls IV, Birnam IV, Peterboro, Haliburton, Bruce Mines I, Port Dover, Georgetown III, Winnipeg II, Quebec IV, Southampton, Barrie III.

19. Agincourt III, Lucknow IV.

20. Waitefield III, Kenora III.

21. Peterboro'.

23. Treherne, Melfort III, Grand Manan IV.

24. Brandon, Treherne, Almasippi, St. Albans I, Aitkensville I, Fairfield III, Brownhill II. Waseca, Winnipeg II, Father Point I, Gilt Edge II.

25. Almasippi, Aitkensville III, Beatrice, Gatesgarth III, Minnedosa I.

26. Hillview I, Quebec IV.

27. St Albans III.

28. Oliver, Strassburg, Quebec IV, Fort Vermilion, Gilt Edge III.

29. Oliver, Fort Vermilion.

30. Spirit River, Almasippi, Madoc III, Foxleigh.

31. Hillview, Aitkensville IV, Madoc IV, Meota IV, Foxleigh, Chaplin IV.

Thunder recorded:—

1. Agincourt, Port Burwell, East Toronto, Brantford, Port Stanley.

2. Lake Edward, Stony Creek, Cottam, Port Burwell, Paris, East Toronto, Brantford, Madoc, Peterboro', Birnam, Bloomfield, Georgetown, Deer Park, Wooler, Westport, Princeton, Port Stanley.

3. Arden, Grand Manan, Port Stanley.

4. Windsor.

7. Aitkensville.

8. Spirit River.

9. Lake Talon, Haliburton, Birnam, Emsdale, Uplands.

10. Lake Edward, Shawbridge, Agincourt.

11. Pt. Lepreaux, Sussex, Windsor, Chilcotin.

12. Chaplin.

13. Estevan, Cannington Manor, St. Albans, Cartwright, Quesnel.

14. Estevan, Okanagan Mission.

16. Bella Coola.

17. Pt. Clark, Mantague, Bella Coola.

18. Chaplin, Bruce Mines, St. John, N. B., East End, Nicola Lake, Grand Forks, Salmon Arm, Okanagan Mission.

19. Estevan, Cannington Manor, Schreiber, Kakabeka Falls.

20. Indian Head, Pt. Clark.

21. Fairfield, Cannington Manor.

22. Fairfield, Clinton, Lucknow, Birnam, Strathroy, Deloraine, Cartwright.

23. Agincourt, Stony Creek, Port Burwell, Lucknow, Madoc, Emsdale, Deer Park, Wesley, Southampton, Monte Creek, Tobacco Plains.

24. Nicola Lake, Hope, Ruskin, Salmon Arm, Princeton, Okanagan Mission, North Nicomen, Cranbrook.

25. Halkirk, Hilldown, Macleod, Waitefield, Jumping Pound, Grand Forks, Alix.

26. Maple Creek, Harmattan, Loch Sloy, North Nicomen.

27. St. Stephen, Halkirk, Waitefield, Jumping Pound, East End, Golden.

28. St. Stephen, Victoria, Waitefield, Loch Sloy, Grand Manan.

29. Fairfield, Beatrice, Hamilton, Clinton, Brantford, Midland, Peterboro', Birnam Aurora, Georgetown, Emsdale, Westminster, Sion, Toronto.

30. Paris, Peterboro', Arden, Almasippi, Rapid City.

31. Lake Edward, Sydney.

FORECASTS FOR MAY, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1252. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	83	64	14	5	85·5
Saskatchewan	81	65	11	8	83·9
Manitoba	88	73	9	6	88·1
Lake Superior	117	97	15	5	89·3
Georgian Bay	118	97	14	7	88·1
Lower Lake Region	118	99	14	5	89·8
Ottawa Valley	101	85	18	1	90·4
Upper St. Lawrence	106	85	20	1	89·6
Lower St. Lawrence	107	88	12	7	87·8
Gulf	107	81	20	6	85·0
Maritime Provinces West	110	85	21	4	86·8
Maritime Provinces East	110	84	21	5	85·9
Total	1252	1003	189	60	87·6

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
July, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

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Monthly Weather Review.

VOL. XXXIV. JUNE, 1910. No. 6.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

Except in the extreme south of British Columbia the mean temperature of the month of June was below the normal, the deficiency ranging from 1° to as much as 4° in the far north. In the eastern interior and in the far north the normal rainfall was exceeded, but elsewhere was deficient. About the 4th and 10th high temperatures were recorded. At several places 90° was exceeded and 96·5° was reached at Kamloops on the latter date. The hay and fruit crops promised well at the close of the month.

June was a warm, very dry month in Alberta. In the southern districts the normal mean temperature was exceeded by from 4° to 5°, but in the districts further north the excess was less than 1°. About the 11th and 27th very high temperatures were experienced. 90° was exceeded at many stations and 100° was recorded at Medicine Hat on the 26th. Frost occurred on the first two nights. The amount of precipitation recorded was a very small percentage of the normal.

In Saskatchewan the mean temperature of the month was from 1° to 4° higher than the average June temperature of the last 25 years in that province. The greater excesses occurred in the central portion of the province. From the 18th to the 20th, and from the 25th to the end of the month the highest temperatures were recorded. 95° was exceeded at the majority of the stations, while 100° was reached at a small number of places near the intersection of the 51st parallel and the 108th meridian. On the 23rd heavy thunderstorms occurred in some parts of southeastern Saskatchewan, making the total precipitation of the month at those places in excess of the normal, but over the province generally the rainfall was much less than normal.

The crops in Alberta and Saskatchewan had suffered somewhat from the drought, but in the northern districts there had been sufficient rain during the latter part of the month to put the wheat in good condition by the close of the month.

From the 10th to the end of the month intense heat prevailed in Manitoba, with very little rain. During this period the crops suffered considerably. The mean temperature of the month was from 3° to 7° above the normal. Temperatures of 100°, more or less, were recorded throughout Manitoba on the 20th and 21st, and 95° was exceeded on several days.

In that portion of Ontario lying northwest of Lake Superior the mean temperature of the month was about 6° above the normal, much the same weather conditions having prevailed there as in Manitoba. To the east of Lake Superior the positive departure from normal was not so great, while in the peninsula and in eastern Ontario the mean of the month was generally below average. The amount of precipitation was deficient, except over a limited area in southwestern Ontario. The first part of the month was very cool, but from the 16th to the end of the month very warm weather was experienced; 95° was exceeded on the 22nd and 23rd and on the 27th and 29th. The hay crop was reported a failure at Port Arthur, but fall wheat was in excellent condition in southern Ontario.

The mean temperature of June was about 2° below normal in Quebec, except in the Gulf counties where the normal was attained. The first part of the month was unseasonably cool, but from the 17th

to the end warmer weather was experienced. During the first week some injury was caused to garden crops by frost. Precipitation was generally much below the normal.

In southern New Brunswick and northeastern Nova Scotia the normal mean temperature was slightly exceeded, but elsewhere in the Maritime Provinces the mean temperature of the month was either normal or slightly below. Precipitation was generally in excess of normal. No days of extreme heat occurred.

ATMOSPHERIC PRESSURE.

The mean value of the atmospheric pressure for June closely approached the normal throughout Canada, except in the Maritime Provinces, and very locally in southeastern Alberta, where there were negative differences of 0·10 and 0·08 of an inch respectively. Departures from average were positive on the British Columbian coast, and from Saskatchewan to the Georgian Bay District of Ontario; elsewhere in Canada they were negative. The range of difference was 0·15 of an inch, the extremes being −0·05 of an inch at Winnipeg, Man., and −0·10 of an inch at Sydney, N.S.

LOW AREAS.

Cyclonic activity was fairly well marked over the Western and Maritime Provinces during June but was not much in evidence in the Lake Region. Strong winds were of frequent occurrence in the Maritime Provinces and heavy rain attended the low areas in that region.

Eleven areas of low barometric pressure were traced during the month, but only five made the transcontinental passage within the field of observation.

HIGH AREAS.

Eight areas of high barometric pressure were charted during June, all of them being of the usual feeble summer type. All the systems were first observed over the Northwest States or Provinces, and as a rule crossed the Lake Region.

WINDS.

In British Columbia and on Vancouver Island and over the Mainland, although largely variable, the direction favoured somewhat the south and west quadrants. There were six days with strong and eleven with fresh breezes, and on one occasion the force of a moderate gale was attained.

In Alberta and Saskatchewan the direction was variable, with six days with strong and six with fresh breezes and one moderate gale in the former, and with seven days with strong and thirteen with fresh breezes and one gale in the latter province.

In Manitoba the direction was variable, with five days with strong and eleven with fresh breezes.

In the lake region and in the Ottawa and Upper St. Lawrence valleys the direction was variable, the force being chiefly from light to moderate, the force of a fresh or strong breeze being seldom attained.

In the Lower St. Lawrence Valley and the Gulf districts the direction was variable with six days with strong and thirteen with fresh breezes.

In the Maritime Provinces the direction was variable, with four days with strong and eighteen with fresh breezes.

TEMPERATURE.

In British Columbia the mean temperature of June was below the normal from 1° to 4°. In Alberta the normal mean was exceeded by from 4° to 5° in the southern districts and by less than 1° in the northern portion. In Saskatchewan the excess ranged from 1° to 4° and in Manitoba from 3° to 7°. In the Lake Superior region of Ontario the normal mean temperature was exceeded by from 3° to 6°, but in the peninsula and eastern Ontario the mean of the month was for the most part slightly below average and in a few counties in southwestern Ontario was as much as 4° below. In Quebec the mean was about 2° lower than the normal except in the Gulf counties, where it was approximately normal. In southern New Brunswick and northeastern Nova Scotia the normal temperature was slightly exceeded, but elsewhere in the Maritime Provinces there was a slight deficiency.

The highest and lowest temperatures recorded in each Province during the month of June, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	97° at Kamloops on the 10th.	18° at Hedley (Nickel Plate) on the 12th.
Alberta,	102° at Medicine Hat on the 26th.	19° at Loveland on the 7th.
Saskatchewan,	106° at East End on the 26th.	21° at Maple Creek on the 5th.
Manitoba,	104° at Aweme on the 20th and 29th.	25° at Pierson on the 1st.
Ontario,	99° at Kenora on the 27th.	23° at Kakabeka Falls on the 3rd.
Quebec,	86° at Abitibi on the 16th and Shawbridge on the 29th.	27° at Abitibi on the 4th.
New Brunswick,	84° at Fredericton on the 22nd.	29° at Sussex on the 5th.
Nova Scotia,	84° at Port Hastings on the 20th.	31° at Parrsboro' on the 4th.
P. E. Island,	76° at Charlottetown on the 22nd.	34° at Fredericton on the 6th.

PRECIPITATION.

Except in the Maritime Provinces the rainfall of the month of June was generally less than the normal throughout the Dominion. Exceptions were the northern districts of British Columbia, a few localities in the eastern portion of the same province, a narrow area in southeastern Saskatchewan and in southwestern Ontario. Most of the exceptions were due to local thunderstorms.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month of June shewed widely varying differences from normal in each province, doubtless owing to the uneven distribution of clouds over areas exposed to thunderstorms. In southern Saskatchewan, Manitoba and eastern Ontario, however, there was a general excess over normal, and in Quebec and the Maritime Provinces a deficiency.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JUNE, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure.				Temperature.								Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from									Velocity of wind.			Precipitation.				Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in month.					
				in.	in.	in.	in.																																
British Columbia																																						
Alberni (Beaver Creek)	49	15	124	49	300											54·6		5·0	15	90·0		10	32·0	29	28·9															1·97		0·36	0·53	6	21	0	0	0
Agassiz	49	14	121	31	52											62·1	+	2·9	18	91·0		6	42·0		3	28·0															3·51		1·28	0·49	13	17	0	0	0
Atlin	59	35	133	38	2240	29·93		30·27	29·66	0·61						47·4			4	71·0	19	20	30·0		13	19·7				7	1	1	0	1	19	22	1	2	2	12	60	3·9	8 0		1·28		0·30	9	21	0	0	0
Barkerville	53	2	121	35	1180	29·90		30·10	29·51	0·59						46·5		3·9	22	75·0		10	26·0		12	19·9		75		7	1	1	1	0	6	3	15	6	0	28	60	3·6	20 0	21 S.E.	3·56	+0·11	0·86	16	14	0	1	0
Bella Coola	52	40	126	54	150											53·0		4·4	12	78·0		3	31·0	3	7	21·0															2·81	+1·10	1·21	15	15	0	1	0
Babine Lake																48·1			2	69	0	5	29·0		7	21·2															2·92		0·59	16	11	0	1	0
Chilcotin (Big Creek)	51	10	123	0	3100											50·3			7	83·0		10	24·0		12	28·8															1·53		0·48	6	24	0	2	0
Cranbrook	49	30	115	50												57·1			6	86·0		10	27·5		1	32·9															1·16		0·51	5	25	0	1	0
Clayoquot	49	11	125	47	10											52·8		1·4	11	71·0		3 9	38·0	2	29	17·6															3·59		1·01	0·91	11	19	0	0	0
Cowichan (Tzouhalem)	48	25	123	42	170											56·1			1	80·0		10	37·4		3	29·0															1·29		0·18	7	23	0	0	0
Chilliwack	49	10	121	57	21											56·8		3·2	12	89·0		10	38·0		23	18·0															2·50		1·49	1·17	9	21	0	3	0
Enderby	50	32	119	7	1180											60·4			7	89·0		10	41·0	1	30	29·0															0·78			0·84	9	21	0	0	0
Fairview																75·1			1	91·0		23	59·0		8	23·5															0·35			0·15	3	28	0	2	0
Fruitvale																57·3			1	89·5		10	31·5		1	33·9															2·17			0·61	9	21	0	1	0
Glacier	51	14	117	29	4072											50·5	—	0·1	10	77·0		11	33·0	2	13	22·7															3·65			0·67	11	19	0	0	0
Golden	51	16	116	55	2850											51·7			9	78·0	10	26	37·0		2	25·0															1·57			0·45	10	20	0	2	0
Holberg																49·8			2	68·3		4	38·3		29	10·9															3·72		1·84		20	10	0	0	0
Hedley	49	35	120	10												57·5			5	92·0		10	38·0		20	24·6															1·66			0·13	1	18	0	0	0
Hedley (Nickel Plate)																38·1			5	63·0		10	18·0		12	19·6															2·78			0·45	12	18	0	0	0
Hope																57·4			1	93·0		10	14·0		23	22·4															0·83			0·24	8	27	0	1	0
Ikeda Bay	52	17	131	7	5											47·3		—	2	59·0	3	19	36·0		6	8·9															6·27			1·44	17	13	0	0	0
Kamloops	50	41	120	29	1245	29·89		30·11	29·50	0·61						62·1	—	1·4	18	96·5		10	42·5		20	23·9		43		7	4	2	9	2	10	12	1	1	4	16	60	8 0	20 0		1·18		0·06	0·50	9	21	0	0	0
Kitamaat	53	59	128	42																																														
Ladner	49	5	123	4												51·8	—	2·0	10	76·0		4	39·0		27	21·1															1·96		0·46	0·45	7	23	0	0	0
Massett, Q.C.I.	53	58	132	9	30											51·2	—	1·6	13	69·0		1 7	38·6		12	13·0															2 47	+0	0·8	0	17	23	7	0	0	0
Midway	49	0	118	50	1800																																													
aNanaimo	49	10	123	37	125																																													
Nicola Lake	50	9	120	39	2120											51·3	—	2·6	15	81·0		1	36·0		12	22·4															1·71		0·38	0·78	8	22	0	3	0
North Nicomen	49	12	122	2	59											57·3	—	2·0	18	86·0		10	35·0		1	20·2															2·89		1·38	1·12	10	20	0	1	0
New Westminster	49	13	122	54	330	30·01		30·31	29·71	0·60						56·1		3·1	22	81·3		4	40 3		17	18·2		78		7	9	0	1	15	1	6	19	1	1	16	60	4 6	20 0	—	2·25	—	0·80	0·66	11	19	0	0	0
Needles																																																	
Nelson	49	20	117	21	1760											58·6			8	84·0		26	37 0	2	12	26·6															2·32			0·40	15	15	0	1	0
Okanagan Mission (Kelowna)	49	52	119	29	1200											59·3		1·2	12	86·0		10	40·0		12	24·7															0·92	—0	1·1	0·23	9	21	5	1	0
Port Simpson	54	31	130	26	26	29·99		30·18	29·73	0·45						48·9		1·5	25	62·3		19	39·6		12	10 1		91		8	19	0	1	3	1	11	6	5	9	21	60	5·1	20 0	5 w	8·12	+4	1·6	2·07	21	9	0	2	2
Princeton	49	29	120	20	1650											55·1	—	1·3	11	88·0		10	32·5		1	29·0															2·36	+1	3·1	0·51	10	20	0	2	0
Penticton																50·6			1	89·0		25	38·0		20	26·9															1·33			0·40	10	20	0	0	0
Pemberton Hatchery																55·9			3	85·5		10	36·0		28	22·3															1·62			0·49	5	25	0	0	0
Prince Rupert	54	18	130	18																																													
Quesnelle	52	59	122	30	1700											54·8	—	3·1	15	87·0		11	29·0		7	25·5															2·92	+1	2·1	1·0	11	19	0	0	0
Revelstoke	51	0	118	6	1476											57·7		0·1	11	84·0		10	40·0		6	24·7															2·51		0·71	0·58	10	20	0	0	0
Rossland	49	5	117	18	3400											56·3			6	79·5		25	36·0		5	22·9															2·62			0·84	8	22	0	1	0
Ruskin (Stave Falls)	49	16	122	23	125											57·2			1	86·0		10	39·0		2	20·1															3·79	—		1·02	12	18	0	0	0
Stuart's Lake (Fort St. James)	54	28	124	12	2280											49·8		1·0	17	71·5		11	26·5		28	23·5															1·55	+0·01	0·37	10	20	0	1	0
Salmon Arm	50	12	119	35	1215											59·7			5	89·0		10	41 0		12	25·2															3·13			1·10	12	18	0	5	0
Steveston (Garry Point)	49	21	123	17												55·4	—	1·1	15	75·0		11	37 0		7	17·7															1·47		0·28	0·56	9	21	0	0	0
Swanson Bay																48·2			2	68·0	1	19	36·0	1	4	14·3															10·87			1·40	17	30	0	1	0
Salt Spring Island	48	50	123	20												55·6			1	80·0		10	40·0		3	18·9															1·31			0·48	10	20	0	0	0
Summerland	49	57	119	0	1100											59·8			3	88·0		10	37 0	12	20	21·0															1·01			0·25	6	24	0	1	0
Tobacco Plains (Elko)	49	1	115	5	2681											62·7	+	3·4	15	91·0		27	29·0		2	30·5															0·81	—1·72	0·18	3·27	6	2	0		0
aTranquille	50	41	120	29		28·70		28·96	28·42	0·54						59·8			2	83·0		4	39·0	12	27	25·3		51		6	1	6	5	5	9	2	22	15	11	15	90				1·30			0·70	5	25	0	0	0
Vernon (Coldstream Ranch)	50	11	119	15	1575																																												
Victoria	48	24	123	19	85	30·02		30·33	29·81	0·52						57·0		0·2	18	76·2	4	10	41 4		3	16·3		68		6	2	1	1	2	2	20	17	12	3	2	60	11 2	40·0	1 8 w	0·96	+0·05	0·33	7	23	0	1	0
Vancouver	49	17	123	5	136	30·05		30·38	29·71	0·67						57·1	—	1·2	10	74·9		4	41 8		3	16·7		55		6	4	0	8	12	5	1	10	9	10	5	60	5 4	20·0	1 w	1·98		0·78	0·47	1	19	0	0	0
Winter Harbour	50	32	128	3												50 9	—	2·6	11	71·0		5	40·0	2	3	12·3															5·85	+0·27	1·52	15	15	0	0	0
Wilmer																56·1			1	85·0	10	25	33 0	2	5	30·5															1·61			0·56	7	23	0	0	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JUNE, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
	°	°		in.	in.	in.	in.																																	
SASKATCHEWAN *Con.*																																								
Scott (Hearts Hill)								56·3	—	1	92·9	26	28·5	2	— 5	31·5																	2·09		0·65	11	19	0	8	0
The Pas			860	29·00	30·26	29·60	0·66	61·8		1	86·0	21	30·0	1	21·8			8																2·32		0·49	13	17	0	8	0
Waseca	53	6	103	29				56·7		3	86·0	11	28·0	1	26·0					0	3	6	7	1	5	3	5	0	30				1·96		0·69	6	24	0	0	0
Yorkton	51	11	102	29				58·9		2	89·0	27	28·0	1	6	25·2																	1·35		1·00	8	22	0	0	0
MANITOBA																																								
Almasippi	49	14	99	20				67·8			8	20	34·0		1	28·2																	3·13		1·29	9	21	1	5	0
a Awene (St. Alban's)	49	12	99	33	1180	28·72	28·03	28·17	0·56	68·1	+ 5	3	25	94·0	20	29	30·5																	.48	0·92	0·05	13	17	2	0	0
Brandon	49	51	99	57	1176					61·6	+ 3	6	22	102·2		20	25·5		1	30·5		5	1	6	19	8	17	1	17	3	15	1	140				2·60	— 0·91	0·81	10	20	0	1	0
Birtle	50	25	101	1	1703																																					
Berens River	52	18	97	23	710																																					
Carberry	49	52	99	20	1258						5	100·0		28																				1·67		0·58	10	20	0	3	0
Carman	49	31	98	0	872			70·9			5	102·5	21	38·0		1	28·5																	2·85		0·92	14	16	2	0	0
Cypress River	49	33	99	3	1232			65·7			5	100·0	30	31·0		1	26·1																	1·52	1·76	0·73	7	23	1	1	0
Hillview	49	55	100	33	1400			64·7	+	3	6	25	98·0	28	27·0		1	25·5		3	3	3	9	11	19	17	11	5	13				90									
Minnedosa	50	15	99	50	1820	29·91	30·24	29·17	0·77	62·7	+	3	1	27	98·9	28	30·0	1	—	2	26·7	5	1	2	6	3	11	1	2	1	6	25	62	90				2·63	0·78	0·56	13	17	0	5	0
Morden	49	11	98	6	978			68·3			5	103·0	21	33·5		2	27·1																	1·51		0·58	8	22	2	8	0
Mount Horn Ray (Kirkenwall)								62·4			1	102·2	18	36·5		2	24·7					9	11	3	13	6	1	3	7	7	60				1·63	1·51	0·68	7	23	0	3	0
Oakbank	49	57	96	42	740			66·3	+	5	3	15	95·0	1	30·5		2	28·1					2	4	1	0	3	9	4	5	2	30				1·03		0·25	7	23	0	3	0
Pipestone	49	31	100	58	1100			63·0			8	95·0	15	29·0		1	27·1																	2·43	0·08	0·74	8	22	0	0	0
Portage la Prairie	49	57	98	17	890			65·0	+	3	3	23	99·7	20	32·0		1	25·5																	2·91		0·85	12	18	0	0	0
Portage la Prairie (2)	49	56	98	17				62·6			5	100·0	21	32·0		2	23·9																	1·03		0·30	1	26	0	0	0
Pierson	49	11	101	5	1531			61·1			5	102·0	21	25·0		1	28·9																	1·30	1·79	0·40	3	27	0	0	0
Stony Mountain	50	10	97	14	803			66·8	+	5	5	29	102·0	22	28·0		1	31·9					1	10	1	3	21	6	1	8	0	60	11		IV	3·17		0·87	11	19	0	2	0
Swan River	52	6	101	15	1112			61·1			3	93·0	26	31·0		2	23·2																	1·54		2·21	11	16	1	6	0
Treherne	49	36	98	40	1212			66·1	+	6	8	15	100·5	21	29·0		2	25·1																	1·35		4·50	5	25	0	0	0
Virden	49	51	100	55	1441			65·2			5	103·0	20	31·0		1	28·1																	2·38	1·06	0·75	10	20	0	5	0
Winnipeg	49	53	97	7	760	29·91	30·21	29·57	0·67	68·1	+	6	3	36	99·2	21	31·4			2·7	2	8	1	5	9	19	1	7	5	2	60											
ONTARIO																																								
Alton	43	51	80	5	1250																																					
Aurora	43	57	79	28	896			62·0			2	92·2	20	31·9		1	25·0																	1·09		1·62	5	25	0	1	0
Agincourt	43	47	79	16	500			63·1	—	0	4	11	90·3	22	38·1		1	32·6		5	5	3	7	18	3	6	11	21	18	0	90	10		28 11·8	1·07	— 1·36	0·67	6	24	0	1	1
Barrie	44	23	79	41	880			62·1	—	1	2	30	87·7	22	35·3		1	32·1		4	2	7	5	5	5	2	3	5	29	29	90				0·98	—	0·66	5	25	0	0	0
Beatrice	45	8	79	20	800			61·4	—	0	5	35	84·0	16	29	32·0		1	03·4		4	5	7	1	1	6	3	5	3	11	50	90				1·14	2·07	0·67	6	24	0	0	2
Bruce Mines	46	18	83	55	595			62·3	+	1	2	12	93·0	30	33·0		3	27·2																	1·21	1·90	0·53	6	24	0	1	0
Burk's Falls	45	36	79	24	1000			61·7			2	87·0	30	33·0		1	19·5					22	9	10	0	1	2	13	2	1	0				2·43	0·48	1·00	8	22	0	3	1
Burnt River	44	27	78	45	900			61·1			0	87·0	22	33·0		1	22·9																	0·91	1·26	0·33	6	24	0	0	2
Brantford	43	10	80	21	750			64·1			0	8	28·92·0	22	33	37·0		3	22·9																1·06		0·50	6	24	0	1	0
Bloomfield	43	59	77	21	260			62·1			1	6	13	86·0			30·5																		1·05	0·96	2·0	5	25	0	0	0
Bancroft	45	1	77	50				61·0	—	1	5	19	87·0		22	29·0		3	25·4																11·98		6·10	4	26	0	1	0
Copper Cliff	46	30	80	59				61·8			1	90·0	29	32·0		3	24·6																	2·09		1·20	7	23	0	0	1
Clinton	43	32	81	37				59·8			8	85·0	27	33·0		1	20·2					1	5	9	2	3	5	11	20	1	6										
Coldwater	44	38	79	40	690																																					
Cockburn Island	45	57	83	18	610			63·7	—	3	7	28	92·0	18	30·0		3	28·0					18	3	1	5	22	3	8	0	0	60				1·84	— 1·12	0·78	7	23	0	0	0
Cottam	42	7	82	15	646			66·0	—	0	2	23	96·0	23	33·0		1	26·3																	2·30	— 0·03	1·12	6	24	0	0	0
Chatham	42	23	82	12	595																																					
Cochrane					960																																					
East Toronto	43	35	79	18				63·1			1	92·0	32	39·0		1	22·3																	0·99		0·67	3	27	0	0	2
Elora	43	11	80	24	1274			60·9		2	8	13	88·2	21	32·0		1	25·2																	1·04	1·04	0·67	7	23	0	0	0
Gravenhurst	44	51	79	20	770			60·1		2	7	30	87·0	16	29·0		1	26·1					13	1	9	2	6	5	19	10	25	90	11		III 11·4	0·96	2·48	0·65	5	25	0	0	0
Guelph	43	33	80	16	1050			63·0	+	0	1	24	87·0	23	37·0		1	29·3																	0·78	2·03	0·38	7	23	0	1	0
Grimsby					252			63·6			1	92·0	24	38·0		1	24·0																	1·31		0·48	8	22	0	0	0
Haileybury	47	29	79	39	687	29·93	30·32	29·20	0·95	61·1	+	2	7	17	89·9	22	30·3			4·2	0	11	6	0	3	6	5	3	9	11	60				1·93	1·16	0·55	9	21	3	5	1
Hamilton	43	16	79	54	303			61·8		3	5	32	92·0	22	43·0		1	20·2																	1·28		0·67	5	25	0	0	0
Haliburton	45	1	78	28	1050			61·7	—	2	6	22	90·0	15	20	30·0		1	31·1																0·96	2·43	0·26	5	25	0	1	0
Kenora	49	18	94	32	1102			65·9	—		9	98·5	27	30·0		1	24·2																						3	3	0		
Kakabeka Falls	48	29	89	36	912			62·7	—		2	96·0	29	23·0		3	36·6																	0·28	—	0·09	6	21	0	1	0

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JUNE, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
New Brunswick																																								
Bathurst	47 39	65 42	45																																					
Chatham	47 0	65 29	21	29 90	30 38	29 13	0 90	57 6	— 2 2	35	80 1	26	35 0	5	19 8			6	3	5	3	16	5	1	10	7	13	0	60				1 51	1 48	1 07	14	16	0	0	0
Dalhousie	48 1	66 22	30					55 8	— 1 0	36	75 0	21	32 0	23	15 5					0	1	10	3	0	0	11	1	4	30				2 16	— 0 80	5 2	0	0	0	0	0
Fredericton	45 57	66 39	161	29 90	30 33	29 12	0 91	58 1	— 2 1	37	83 5	22	39 9	6	19 7		73	6	3	7	11	12	7	1	10	13	3	3	90	7 7	16 7	13 SW.	3 01	— 1 38	2 50	13	17	0	2	0
Grand Manan	44 47	66 46	49	29 91	30 27	29 18	0 79	56 6	+ 0 6	29	76 6	11	41 0	5	14 1			7	4	0	2	6	6	5	12	16	9	4	67				3 31	— 5 18	6 38	12	18	0	1	9
Moncton	46 9	64 45	80					56 9	+ 1 0	13	79 0	22	33 0	5	19 5			0	0	0	0	6	3	0	2	12	7	10	30				5 67	+ 2 86	2 70	9	21	0	2	0
*Point Lepreaux	45 4	66 28	311					52 9	+ 1 2	28	69 0	22	14 0	1 6				6	2	8	3	18	4	3	12	12	8	0	78	11	V.	6 SE.	3 31	— 0 05	0 87	10	20	0	2	10
St. John	45 17	66 4	70	29 90	30 27	29 52	0 75	57 3	+ 1 4	36	75 8	11	39 3	5	12 6			6	5	8	3	7	9	15	7	1	9	1	60				1 91	— 0 91	0 95	18	12	0	2	2
St. Stephen	45 11	67 16	35					58 0	— 0 6	13	81 0	22	31 0	5	21 5																		1 33	— 1 08	1 25	10	20	0	2	0
Sussex	45 43	65 58	69					57 5	— 0 6	13	81 0	22	29 0	5	20 0					1	2	0	1	0	10	2	3	11	30				3 85	— 0 75	0 68	14	16	0	0	0
Nova Scotia																																								
Halifax	44 39	63 36	88	29 91	30 33	29 52	0 81	56 7	— 0 9	35	81 8	22	36 2	6	17 5					6	10	4	1	11	11	12	5	0	60				5 07	1 17	1 47	19	11	0	1	6
Port Hastings	45 39	61 32	45					57 7	— 1 9	19	84 0	20	35 0	19	25 5					0	1	0	5	11	8	0	5	0	30				2 82	— 0 71	0 98	4	26	0	0	0
Parrsboro	45 23	64 19	10					54 5	— 0 8	11	73 0	26	31 0	4	19 0																		3 95	+ 1 0	3 98	8	22	0	0	0
Sydney	46 10	60 10	35	29 87	30 32	29 50	0 82	55 0	+ 0 3	36	76 0	21	31 1	6	16 8			8	17	5	4	5	3	1	15	11	11	2	60				3 21	+ 0 12	0 90	12	18	0	0	0
*Sable Island, E. Point	43 58	59 46	25					52 8	+ 2 1	26	69 0	28	41 0	5						3	8	0	5	3	11	0	29	0	60				3 46	0 69	1 05	6	24	0	0	12
Truro	45 22	63 18						56 1	— 1 6	37	82 3	21	29 5	3	19 8					13	5	0	18	8	21	10	9	6	90				3 77	+ 0 1	1 50	13	15	0	1	0
Windsor	44 59	64 6	90					56 0	— 7	78	0	22	32 6	3	20 5																		3 65	— 0 50	1 71	11	0	1	0	0
*Whitehead	45 4	61 8	20					50 6	+ 1 2	26	64 0	11	43 0	5																			2 59	— 0 20	0 56	6	21	0	0	13
aWolfville	45 7	64 20		29 81	30 19	29 41	0 75	57 2	— 1 1	11	76 5	21	37 0	5	17 5					18	1	6	0	7	1	20	3	11	69				3 78	— 0 81	1 16	16	0	2	0	0
Yarmouth	43 50	66 2	60	29 97	30 36	29 11	0 92	49 7	— 5 6	29	69 7	29	31 0	6	15 8					18	1	10	1	15	9	13	6	2	60				1 56	— 1 67	0 51	12	18	0	0	10
P. E. Island																																								
Charlottetown	46 14	63 10	38	29 91	30 31	29 18	0 86	56 0	— 2 0	31	76 0	22	34 0	6	15 1					1	5	3	14	11	11	4	6	2	60				1 12	+ 2 05	1 32	15	15	0	1	0
Hamilton	46 25	63 18						54 5	— 3 0	13	77 0	23	31 0	6	18 4					2	0	1	0	30	9	4	1	0	30				3 23	0 15	1 50	3	27	0	0	0
Newfoundland																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 10	27	29 88	30 32	29 18	0 81	49 1	—	2	72 0	27	35 0	9	15 0					13	7	3	3	12	7	2	7	6	60				0 78	—	0 18	9	21	0	0	11
*Cape Norman	51 38	55 52						43 6	+ 2 5	26	60 0	28	37 0	5	21					3	31	1	11	5	1	12	13	0	80				5 85	— 3 84	1 46	12	18	0	0	11
*Point Rich	50 42	57 25	35					46 6	0 2	26	57 0	3	11	37 0	5					13	11	26	2	11	16	12	1	0	80				2 10	— 0 81	0 70	6	24	0	0	0
Point aux Basques	47 35	59 10	27	29 88	30 33	29 37	0 96	48 1		2	69 0	25	36 5	6	9 2					4	3	26	1	3	0	5	12	3	60				3 91		0 58	17	13	0	0	6
St. John's	47 31	52 42	125	29 85	30 31	29 23	1 08	51 6	— 1 9	37	70 0	4	27	31 0	7	15 9			6	8	8	6	5	0	12	9	11	3	3	60				5 31	— 1 15	1 35	20	10	0	0	2
Bermuda																																								
Prospect	32 17	64 50	151	30 10	30 14	29 90	0 51	72 6	+ 2 3	18	81 2	22	30	57 0	13 9	6				0	5	0	7	29	13	3	3	0	60				0 88	— 1 30	0 24	6	24	0	1	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING JUNE, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days ·01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
	in.			in.		in.		in.		
BRITISH COLUMBIA—										
Annis	1·01	5	13	0·18	20					
Alberni										
Beaver Lake	1·12	6	21	0·15	19					
Coquitlam	2·52	9	21	0·87	11					
Denman's Island	2·14	7	23	0·98	20					
Ferguson	2·32	6	24	0·61	11					
Goldstream Lake	1·69	9	21	0·58	19					
Grand Forks	1·45	10	20	0·27	7					
Hornby Island	2·12	7	23	0·90	20					
Jordan River	1·64	6	21	0·60	11					
Little Qualicum (French Creek, V.I.)	1·90	5	25	0·80	20					
Monte Creek	2·07	7	23	0·81	6					
Naas Harbour	3·51	20	10	0·36	8					
Sooke	1·00	5	25	0·30	11-20					
Skidgate	1·86	16	11	0·34	9					
ALBERTA—										
	1·86	16	11	0·34	9					
Bardo	2·11	8	22	0·71	3	*	1	*	1	Thunder on 20.
Bismark	3·25	5	25	0·80	6	6·2	1	6·2	1	Thunder on 6.
Bruederheim	3·94	12	18	0·77	30					Thunder on 20, 21, 28, 29, 30.
Bittern Lake	3·05	14	16	0·67	30	5·5	1	5·5	2	Thunder on 20, 30.
Brooks	0·55	7	23	0·22	3					
Bantry	0·11	6	24	0·03	1-2					
Conjuring Creek										
Coutts	0·42	4	26	0·20	23					
Dorenlee										
Elkwater	1·15	6	21	0·50	30					
Grassy Lake	0·10	1	29	0·10	19					
Jumping Pound	2·81	7	23	1·14	17	1·0	1	1·0	2	Thunder on 1, 9, 16, 19, 23.
Josephsburg										
Kimball										
Lacombe	3·39	12	18	0·67	20	12·00	1	12·0	2	
Langdon										
Loch Sloy	1·22	7	23	0·31	9	1·0	1	1·0	2	Thunder on 15, 17, 20
Macleod	0·98	5	25	0·39	8	*	1	*	2	
Mayton										
Okotoks	0·68	3	27	0·54	20	*	1	*	2	Thunder on 16, 19, 30.
Ponoka	1·26	6	21	0·56	20	6·0	1	6·0	2	
Sion										
Wabamun										
SASKATCHEWAN—										
Elm How	2·73	7	23	1·00	9					Thunder on 7, 20, 23.
Hanley	1·79	7	23	0·41	11-30	1·0	1	1·0	2	Thunder on 19th.
Last Mountain	1·65	5	25	0·50	23-29					Thunder on 8, 24, 23, 26, 29, 30.
Maple Creek	0·19	4	26	0·10	29					
MANITOBA—										
Cartwright	2·30	9	21	0·81	8					Aurora on 6, 19. Thunder on 14, 16, 29.
Deloraine	1·16	7	23	0·50	8-30					Thunderstorm on 29 & 30.
Gretna	0·68	1	29	0·68	3					
Norquay	2·09	8	22	0·79	30	*	6	*	11 30	
Rapid City	3·30	9	21	0·92	8					Thunder on 10, 15, 17, 24, 29.
ONTARIO—										
Arden	1·27	6	24	0·14	6					Thunder on 10, 18.
Deer Park	0·92	5	25	0·55	12					
Dutton	0·80	2	28	0·40	3-8					
Emsdale	2·56	10	20	0·78	12					Thunder on 17, 22, 26.
Ennismore										
Goderich	2·70	11	19	0·40	26					
Georgetown	1·66	7	23	0·75	11					Thunder on 17. Lightning on 14, 26. Fog 6.
Grantham	1·31	7	23	0·19	6					
MacCne	1·43	6	24	0·18	9					
Orangeville	1·73	6	24	0·92	12					
Princeton	0·95	3	27	0·49	11					
Sydenham	0·78	2	28	0·40	5					
Strathroy	1·36	6	24	0·67	12					
Watford	2·00	8	22	0·92	11					
Westport	1·09	9	21	0·28	7					
Wooler	1·21	3	27	0·49	5					
Westminster	1·46	3	27	0·53	12					
Wiarton	1·13	2	28	0·91	11					
Wesley	1·15	7	23	1·06	12					
NEW BRUNSWICK—										
Point Escuminac	4·10	10	20	1·05	7					Thunder on 27. Fog on 7 18, 23, 28.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF JUNE, 1900.

STATIONS.	Hours Ending																		
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria				.25	.36	.42	.52	.47	.58	.61	.61	.63	.68	.68	.61	.54	.51	.31	
Nanaimo				.16	.38	.43	.43	.33	.37	.40	.43	.42	.50	.50	.50	.48	.29	.01	
Vancouver			.03	.19	.26	.29	.33	.35	.39	.48	.58	.57	.57	.57	.50	.52	.68	.10	
Agassiz						.17	.26	.34	.35	.36	.40	.50	.39	.39	.45	.39	.26	.18	
Tranquille				.35	.53	.58	.46	.46	.58	.57	.50	.40	.39	.33	.32	.37	.35	.17	
Summerland			.19	.51	.62	.69	.64	.65	.65	.60	.69	.59	.42	.45	.33	.33	.32		
Kamloops			.20	.57	.54	.57	.66	.67	.68	.69	.58	.54	.53	.46	.41	.39	.31	.10	
Edmonton			.38	.57	.58	.63	.67	.69	.71	.66	.71	.65	.61	.65	.58	.63	.59	.33	
Lethbridge			.37	.61	.63	.68	.68	.74	.83	.83	.87	.79	.85	.84	.83	.76	.36	.37	.01
Lacombe			.15	.55	.64	.64	.70	.65	.72	.74	.78	.77	.68	.73	.76	.70	.21	.20	
Medicine Hat	.20	.65	.69	.69	.69	.70	.69	.71	.71	.77	.76	.69	.64	.67	.54	.21			
Fort Vermilion	.01	.32	.46	.73	.72	.75	.82	.79	.71	.80	.82	.71	.67	.64	.59	.32			
Battleford				.11	.33	.45	.48	.46	.41	.51	.49	.43	.45	.44	.41	.36	.33	.08	
Indian Head			.08	.41	.59	.63	.64	.72	.67	.68	.65	.68	.71	.67	.58	.59	.42	.08	
Moose Jaw			.37	.69	.69	.70	.74	.71	.72	.71	.77	.81	.72	.70	.69	.69	.69	.21	
Brandon			.02	.45	.42	.59	.63	.65	.68	.71	.77	.71	.70	.62	.54	.25	.03		
Winnipeg			.19	.61	.66	.76	.73	.71	.71	.75	.72	.69	.65	.72	.66	.56	.30	.03	
Haileybury			.12	.42	.55	.61	.64	.62	.67	.68	.68	.63	.56	.63	.66	.57	.42	.01	
Gravenhurst																			
Woodstock				.22	.52	.65	.68	.64	.66	.70	.68	.67	.73	.69	.68	.55	.40	.01	
Lindsay					.06	.25	.59	.65	.61	.63	.60	.62	.60	.67	.69	.49	.26	.13	
Barrie		T		.26	.60	.49	.73	.70	.72	.72	.70	.71	.71	.65	.62	.33	.01		
Toronto				.23	.20	.72	.75	.72	.77	.79	.74	.72	.73	.74	.72	.49	.29	.07	
Kingston		.03	.51	.56	.59	.53	.61	.69	.63	.67	.72	.71	.72	.65	.61	.45	.01		
Ottawa				.39	.62	.61	.71	.74	.72	.75	.71	.70	.67	.61	.48	.05			
Montreal			.22	.47	.51	.51	.60	.64	.59	.60	.58	.57	.51	.31	.31	.02			
Quebec			.28	.46	.51	.53	.57	.59	.60	.56	.57	.54	.52	.54	.46	.36	.02		
Sherbrooke		.10	.33	.46	.52	.55	.60	.57	.57	.54	.57	.61	.54	.48	.51	.46	.08		
Fredericton		.02	.25	.42	.41	.47	.50	.57	.47	.54	.57	.54	.53	.49	.41	.31	.08		
Charlottetown		.01	.16	.37	.42	.51	.44	.51	.48	.52	.60	.59	.56	.53	.55	.48	.25		
Truro																			

	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moose Jaw	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.
Registered duration in hours.	222	172	187	136	199	231	213	289	330	297	302	303	171	203	313	235	281	253		255	181	264	261	262	232	196	213	225	197	211
Percentage of possible duration	46	36	38	28	41	47	49	57	69	59	62	52	31	52	61	48	58	53		55	39	57	57	57	50	48	45	48	42	45
Difference from average	+1	—		−1			—			—		—	−16	+12	—	+2	+6	—		+2	−15	+6	0	+1	+2	−5		—	−4	—
Maximum percentage in one day	86	85	81	80	83	83	92	91	90	90	92	82	84	90	93	83	88	92		89	89	90	84	90	80	93	90	96	90	95
Date of maximum	1	3	1	1	15	1	26	1	1	1	21	20	11	25	11	19	26	23		13	20	19	9	29	1	1	1	23	15	16
No. of days completely clouded	0	2	1	5	6	1	1	1	0	1	0	1	1	2	1	3	0	2		1	5	1	2	2	1	1	1	2	6	7

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

5. Father Point, III ; Oliver.

6. Lake Talon, Cartwright, IV ; Moose Horn Bay, IV.

7. Haileybury, III ; Threehills Creek, IV.

8. Quebec, IV.

10. Haileybury, IV.

18. Aweme, IV.

19. Quebec, III ; Montreal, III ; Haileybury, III ; Grenfell, Melfort, Hillview, I; Aweme, I ; Treherne, Almasippi, Lake Talon, Kenora, II ; Schreiber, IV ; Cartwright, II ; Moose Horn Bay, II.

20. Kenora, II ; Crescent Lake, III.

22. Quebec, IV.

24. Charlottetown, IV ;

25. Esterhazy, Muenster, Melfort, III.

26. Kenora, IV.

Thunder recorded :

1. Yarmouth, Golden, Maple Creek, Jumping Pound.

3 Pakan, Meota, St. Stephen.

4. Cannington Manor, Estevan, Carberry, Crescent Lake.

5. Princeton, B.C., Okanagan Mission, Nelson, Nicola Lake, Chilcoten, Salmon Arm, Tobacco Plains, Halkirk.

6. Waitefield, Alix, Hillsdown, Bruce Mines, Bismark.

7. Okanagan Mission, Nelson, Harmattan, Chaplin, Scott, Pense, Lloydminster, Elm How.

8. Montreal, Brome, Haliburton, Bruce Mines, Last Mountain.

9. St. John, Montreal, Brome, Shawinigan Falls, Madoc, Point Lepreaux, Jumping Pound, St. Stephen.

10. Dawson, Chilliwack, North Nicomen, Lake Edward, Madoc, Rapid City, Arden.

11. Haleybury, Nelson, Chilcoten, Athabasca Landing, Bruce Mines, Peace River Crossing.

12. Charlottetown, Wolfville, Harmattan, Esterhazy, Birnam.

13. Brome, Lake Edward.

14. Ottawa, Montreal, Haileybury, Waitefield, Threehills Creek, Pakan, Alix, Halkirk, Hillsdown, Indian Head, Saskatoon, Chaplin, Cannington Manor, Maple Creek, Pense, Foxleigh, Brandon, Hillview, Carberry, Treherne, Almasippi, Copper Cliff, Lake Talon, Haliburton, Schreiber, Montagne, Cartwright, Moose Horn Bay, Crescent Lake.

15. Ottawa, Minnedosa, Kingston, Winnipeg, Waitefield, Loveland, Lacombe, Indian Head, Rathmullen, Chaplin, Estevan, Foxleigh, Lloydminster, Oakland, Treherne, Ursa, Lake Talon, Haliburton, Loch Sloy, Rapid City, Crescent Lake, Peace River Crossing, Stuart's Lake.

16. Port Stanley, Port Arthur, Waitefield, Halkirk, Rathmullen, Saskatoon, Chaplin, Scott, Cannington Manor, Maple Creek, Meota, Ursa, Birnam, Haliburton, Bruce Mines, Kakabeka Falls, Jumping Pound, Okotoks, Cartwright.

17. Ottawa, Minnedosa, Montreal, Southampton, Esterhazy, Saskatoon, Estevan, Swan River, Carberry, Treherne, Brome, Lake Edward, Shawinigan Falls, Agincourt, Birnam, Lucknow, Haliburton, Peterboro', Toronto East, Aurora, Clinton, Brantford, Madoc, Loch Sloy, Rapid City, Emsdale, Georgetown, Moose Horn Bay, Crescent Lake.

18. Ottawa, Minnedosa, Quebec, Port Stanley, Kingston, Winnipeg, Nelson, Salmon Arm, Brome, Lake Edward, Shawinigan Falls, Point Clark, Kenora, Birnam, Clinton, Madoc, Bloomfield, Arden, Moose Horn Bay.

19. Chilliwack, Princeton, Okanagan Mission, Nelson, Nicola Lake, Salmon Arm, Waitefield, Halkirk, Threehills Creek, Macleod, Hillsdown, Lawrence, Gleichen, Rathmullen, Saskatoon, Chaplin, Duck Lake, Birnam, Jumping Pound, Okotoks, Hanley, Fairview.

20. Chilliwack, Tobacco Plains, Princeton, Okanagan Mission, Nelson, Golden, Cranbrook, Salmon Arm, Waitefield, Weta-kiwin, Loveland, Alix, Halkirk, Harmattan, Hillsdown, Esterhazy, Rathmullen, Muenster, Chaplin, Scott, Foxleigh, Lloydminster, Swan River, Carberry, Uplands

Lake Talon, Madoc, Montague, Bardo, Bruederheim, Bittern Lake, Loch Sloy, Elm How, Last Mountain, Crescent Lake, Fairview.

21. Yarmouth, Charlottetown, Waitefield, Threehills Creek, Halkirk, Harmattan, Hillsdown, Scott, Rathmullen, Duck Lake, Foxleigh, Lloydminster, Oakbank, Carberry, Treherne, Almasippi, Brome, Lake Edward, Moncton, Bruederheim, Moose Horn Bay, Crescent Lake.

22. Yarmouth, Grand Manan, Minnedosa, Montreal, Winnipeg, Haileybury, Summerland, Nelson, Esterhazy, Muenster, Chaplin, Duck Lake, Estevan, Meota, Almasippi, Brome, Shawinigan Falls, Point Clark, Lake Talon, Kenora, Moncton, Windsor, N.S., Emsdale.

23. Yarmouth, Halifax, St. John, Winnipeg, Wolfville, Waitfield, Muenster, Chaplin, Scott, Cannington Manor, Estevan, Pense, Melfort, Foxleigh, Hillview, Carberry, Treherne, Kenora, Jumping Pound, Elm How, Last Mountain, Moose Horn Bay, Crescent Lake, St. Stephen.

24. Port Stanley, Rapid City, Babine Lake.

25. Port Stanley, Bella Coola, Schreiber.

26. Charlottetown, Haileybury, Chaplin, Scott, Port Dover, Lake Talon, Last Mountain, Emsdale.

27. Quebec, Kingston, Waitefield, Rathmullen, Muenster, Scott, Duck Lake, Brome, Lake Edward, Point Clark, Point Escuminac, Crescent Lake.

28. Waitefield, Macleod, Alix, Halkirk, Hillsdown, Rathmullen, Saskatoon, Chaplin, Melfort, Foxleigh, Hillview, Carberry, Brome, Bruederheim.

29. Hope, Waitefield, Pakan, Harmattan, Hillsdown, East End, Saskatoon, Hillview, Oakbank, Treherne, Almasippi, Bruederheim, Cartwright, Deloraine, Rapid City.

30. Minnedosa, Winnipeg, Rossland, Salmon Arm, Waitefield, Wetaskiwin, Loveland, Pakan, Macleod, Halkirk, Gleichen, Esterhazy, Rathmullen, Scott, Cannington Manor, Meota, Lloydminster, Carberry, Almasippi, Bruederheim, Bittern Lake, Okotoks, Last Mountain, Deloraine.

FORECASTS FOR JUNE, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1260. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	82	65	13	4	87·2
Saskatchewan	75	56	14	5	81·0
Manitoba	76	62	12	2	89·5
Lake Superior	116	99	14	3	91·4
Lower Lake Region	121	102	13	6	89·7
Georgian Bay	121	105	13	3	92·1
Ottawa Valley	113	101	10	2	93·8
Upper St. Lawrence	113	99	12	2	92·9
Lower St. Lawrence	101	86	14	4	89·4
Gulf	105	78	22	5	81·8
Maritime Provinces West	117	91	21	5	86·7
Maritime Provinces East	117	83	31	3	81·2
Total	1260	1027	189	44	89·0

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
August, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. JULY, 1910. No. 7.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

Except in the extreme southwestern portion of the mainland and the extreme south of Vancouver Island the mean temperature of July, 1910, was less than the average temperature of July for the preceding twenty years. In some districts on Vancouver Island the deficiency exceeded 4°, while on the mainland in latitude 53° the deficiency was approximately 3°. In the central districts the difference from average was not so great, and in the excepted portions of the mainland and Vancouver Island there was an excess of from 1° to 2°. On several days during the month very high temperatures were recorded and at a few places thermometer readings of over 100° were registered. The total precipitation of the month was everywhere below the normal amount, but about the 21st and 22nd there were some heavy showers which were of great benefit to the fruit crop. The bright sunshine of the month exceeded the normal amount for July by about 13% of the total time between sunrise and sunset.

In Alberta the mean temperature of the month was above the July normal, by about 3° in the south and east but by less than 1° in the northwest, 95° was exceeded several times during the month while 100° was exceeded on the 17th and 18th at Lethbridge, Lawrence, Medicine Hat and Macleod. There was a great deficiency of rain throughout the province. The greatest rainfall occurred in the northern districts and was very beneficial to the crops. On account of the great heat about the middle of the month, and the scarcity of moisture the hay crop was very poor, but the wheat crop was in fair condition at the end of the month despite the drought.

In Saskatchewan and Manitoba conditions were very similar to those which obtained in Alberta. The mean temperature exceeded the average of the preceding twenty years by about 3° while the thermometer recorded very high temperatures on several days, notably on the 3rd, 5th, 14th, 15th, 17th, 18th and 21st, when over 100° was recorded at many stations. The precipitation was everywhere very light and considerably below average, especially in southeastern Manitoba where the total fall was less than an inch. At the end of the month hay was reported scarce and grain on the highlands suffering very much from the drought while that on low-lying ground was in fair condition.

In the counties of Ontario lying between Lakes Erie and St. Clair, the mean temperature of July was either normal or slightly below. Also in the southern portion of the counties of Muskoka and Haliburton, in the counties of Peterborough and Carleton, and in parts of Bruce there was a slight deficiency. Stations midway between Winnipeg and Port Arthur, also reported mean temperatures somewhat below the normal. Elsewhere in the province there was an excess over the average of the preceding twenty years ranging from less than 1° to nearly 4°. Over the greater area the excess was about 2°. In the counties contiguous to the Lake and River St. Clair and the River Detroit, the rainfall was less than the normal, as was also the case in the counties lying on the Georgian Bay, and in eastern Ontario north of a line drawn from Lake Simcoe to a point not far to the northward of Kingston. In the remaining counties of Ontario the rainfall was heavy, especially in these counties lying to the north of Lake Erie, where in many localities the total for the month reached nearly four inches. Crops were reported in good condition at the end of the month.

In western Quebec the mean temperature was about 1° above the normal, while in the Gulf districts it was about 1° below. The rainfall distribution was the reverse, below normal in the west and heavy in the east. The greater part of the precipitation was measured during the thunderstorms of the 3rd, 13th, 22nd, 27th and 30th, the greater part of the month being fine and warm.

In the Maritime Provinces the mean temperature of July was for the most part above the normal. It was approximately normal at Chatham and St. John, but was about 2° above in the eastern districts. In the south-western portion of Nova Scotia the precipitation was below the normal, but elsewhere was considerably above. Most of the rain fell in thunderstorms and mainly in the second and last weeks.

HIGH AREAS.

Five areas of high pressure were charted for the month. Three first appeared on the Northern British Columbia coast, one in Northern Alaska and one to the northward of Manitoba. They were of the usual feeble summer type and their general drift was southeastward to the United States Atlantic seabord.

LOW AREAS.

Ten areas of low pressure were charted for July. Five first appeared in the Western Provinces; two in the Pacific States; two in the Upper Lake Region and one to the southward of Nova Scotia. The general course of the areas was far to the northward over the Dominion and out to sea from the Labrador coast. The areas appeared generally to be of little intensity and they were seldom attended by any very strong winds, their presence being chiefly noticeable by their accompanying local thunderstorms.

ATMOSPHERIC PRESSURE.

In British Columbia and northern Alberta the mean atmospheric pressure was slightly above the normal value, but elsewhere in Canada was below. The extreme positive departure from normal was, +0·04° of an inch at Edmonton and the extreme negative,— 0·12° at Charlottetown and Chatham. At St. John's Nfld. there was a negative departure of 0·13° and at Bermuda a positive of 0·04° of an inch.

WINDS.

In British Columbia on Vancouver Island and over the Mainland the direction was largely southerly to westerly with five days with strong and twelve with fresh breezes.

In Alberta the direction was mainly variable but favouring slightly the north and west with six days with strong and five with fresh breezes.

In Saskatchewan the north and west directions were the most general with seventeen days with fresh but few strong breezes.

In Manitoba the north and west directions predominated with thirteen days with strong and twelve with fresh breezes.

In the Lake Region the south and west directions were most in evidence with three days with strong and eight with fresh breezes.

In the Ottawa and Upper St. Lawrence valleys the south and west directions predominated with eight days with fresh but with few strong breezes

In the Lower St. Lawrence Valley and the Gulf and also in the Maritime Provinces the south and west directions usually prevailed with fourteen and thirteen days respectively with fresh but with very few strong breezes.

No storm warnings were issued and no storms were reported.

TEMPERATURE

Except in the extreme southerly districts of British Columbia, the mean temperatures for July in that province were below the normal by about 3°. In Alberta, Saskatchewan and Manitoba, the normal mean was exceeded by about 3° and in Ontario by about 2° over the greater part of the pro-

vince. In Quebec the normal was exceeded by about 1°, in the east and in the west was not reached by 1°. In the Maritime Provinces the mean temperature ranged from normal to 2° above.

The highest and lowest temperatures recorded in each Province during the month of June, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	105° at Hope on 20th.	32° at Chilcoten on the 18th.
Alberta,	103° at Medicine Hat on 17th.	22° at Lawrence on the 27th.
Saskatchewan,	106° at East End on 15th.	33° at Oliver on the 22nd.
Manitoba,	107° at Aweme on 14th	25° at Stony Mountain on the 10th.
Ontario,	97° at Agincourt on 9th.	29° at Elora on the 4th.
Quebec,	92° at St. Anne de Bellevue on 9th.	41° at Brome on the 18th and Father Point on 19th.
New Brunswick,	92° at Chatham on 10th.	46° at Chatham on the 5th.
Nova Scotia,	90° at Port Hastings on 10th.	41° at Port Hastings on the 2nd.
P. E. Island,	85° at Hamilton on 23rd.	50° at Charlottetown on the 3rd.

PRECIPITATION.

In British Columbia, Alberta, Manitoba, Saskatchewan and the Lake Superior districts of Ontario the rainfall was light and much less than normal. In the counties north of Lakes Erie and Ontario the rainfall was heavy, as well as along the Lower St. Lawrence and in the greater part of the Maritime Provinces.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month of July was above the normal, to a marked degree in British Columbia and eastern Manitoba, and to a lesser extent in the remainder of the Western Provinces. In Central Ontario, Quebec and the Maritime Provinces it was slightly below.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure.				Temperature.									Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from										Velocity of wind.			Precipitation.						
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.					N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Heaviest fall in month.	Days with 01 or more.	No. of fair days.	No. of auroræ.	No. of thunder-storms.	No. of fogs.
				in.	in.	in.	in.																																
BRITISH COLUMBIA—																																						
Alberni (Beaver Creek)	49	15	124	49	300																																	
Agassiz	49	14	121	31	52																																	
Atlin	59	35	133	38	2210	30.00	30·31	29·52	0·79	52·3			77·0	29	34·0	3	20·1					7	6	3	0	0	21	21	0	3	2	9	62	1·3	12·0	31 S	2 11		0 30	10	21				
Barkerville	53	2	121	35	4180	29·99	30·21	29·61	0·63	52·0	− 2·9	22	71·0	21	34·0	4	22·1		70	6	0	0	0	0	0	1	17	1	0	10	62	2·6	10·0		2 96	− 0 20	0 60	11	20	8	3	0	0
Bella Coola	52	10	126	54	150					50·6	− 2·7	13	89·0	11	38·0	27	21·4																			1 28	− 1 9	0 58	10	21		1	0	0
Babine Lake	55	38	126	26						54·6	−	2	81·0	12	22	35·8	5–18	26	8																	1 13		0 31	9	22		1	0	0
Chilcotin (Big Creek)	51	10	123	0	3100					57·2	−	7	87·0	11	32·0	18	32·8																			0 62		0 25	5	26	0	1	0	0
Cranbrook	49	30	115	50																																				
Clayoquot	49	11	125	47	10					57·1	− 1·0	11	79·5	9	11·0	19	19·2																			0 43	1 73	0 11	7	21		6	0	0
Cowichan (Tzouhalem)	48	25	123	42	170					63·5	−	10	94·0	10	43·0	27	24·0																			r		r	6	31		0	0	0
Chilliwack	49	10	121	57	21					62 1	− 2·8		93·0	10	40·0	18	26·1																			0 19		0 11	4	17		1	0	0
Enderby	50	32	119	7	1180					65·3	−	2	95·0	12	19	36·0	3	38·1																			1 38		0 87	7	26				
Fairview	49	11	119	36								1	00·5	19	54·0	24	32·3																			0 36		0 12	4	17		2	0	0
Fruitvale	49	9	117	31						61·3		1	96·0	16	31·0	27	41·6																			0 62		0 39	3	28		0	0	0
Glacier	51	11	117	29	1072					56·0	− 1·9	11	85·0	23	35·0	5	26·6																			1 03	0 12	0 11	5	26		0	0	0
Golden	51	16	116	55	2550					60·9		9	90·0	20	34·0	25	34·9																			0 32		0 12	2	20	0	1	0	0
Holberg	50	39	128	18						56·5	−	2	81·5	11	43·0	4	14·9																			1 55		0 65	9	22		0	0	0
Hedley	49	35	120	10						67·2	−	5	97·0	20	43·0	2	3 32·2																			0 55		0 10	3	25		0	0	0
Hedley (Nickel Plate)										51 1		7	78·0	19 20	30·0	7	27·1																			0 75		0 15	2	22		0	0	0
Hope	49	23	121	25						65·5	−	1	05·0	20	43·0	4	18·2																			0 11		0 05	3	28		0	0	0
Ikeda Bay	52	17	131	7	5					53·8	−	3	72·0	21 22	38·0	26	9·7																			0 86		0 37	6	25		0	0	0
Kamloops	50	41	120	29	1215	29·88	30·15	29·57	0·58	70·2	+ 0·1	17	95·4	12	16·0	28·9		12	4	1	7	1	1	8	3	1	25	2	11	62	5·9	18·0	21 W	0 29	0 9	0 15	1	7		0	0	0
Kitamaat	53	59	128	12																																				
Ladner	49	5	123	4						61·0	−	10	81·0	10	45·0	17	21·7																			0 62	1 07	0 02	1	20		0	0	0
Massett, Q.C.I	53	58	132	9	30					57·8	− 0·5	13	75·0	30	16 0	2–12	12·7																			1 86	1 26	0 20	16	15		0	0	0
Midway	49	0	118	50	1800																																			
aNanaimo	49	10	123	37	125	29·97	30·10	29·65	0·45	62·5	− 0·5	10	88·0	10	11·7	4	20·1		78	3	0	1	21	2	8	0	2	1	38	20	93	8·8	30·0	9 N W	0 21	0 5	0 22	3	20		0	0	0
Nicola Lake	50	9	120	39	2120					61·7	− 0·1	15	87 0	12	11 0	4	27·8																			0 78	− 0 18	0 15	3	28		0	0	0
North Nicomen	49	12	122	2	59					63·5	− 1·0	18	92·0	10	45·0	3–18	25·1																			0 23	1 08	0 18	3	28		0	1	0
New Westminster	49	13	122	54	330	30·02	30·19	29·76	0·43	62 3	− 0·6	23	88·0	20	14 6	1	22·4		76	1	1	0	0	12	1	6	21	2	1	19	62	1·7	10·0	—	r	− 1 31	r	0	31		0	0	0
Needles										65·3		2	93·0	12	17·0	13	31·																			0 10		0 10	1	20		0	0	0
Nelson	49	29	117	21	1760					65 8	−	8	91 0	12 24	44·0	16	31·0																			0 10		0 10	1	18		0	0	0
Okanagan Mission (Kelowna)	49	52	119	29	1240					66·5	0·2	12	93·0	11	42·0	1–27	30·1																			0 33	0 76	0 23	3	28	1	3	0	0
Princeton	49	29	120	20	1650					62·0	− 0·9	16	93·0	20	35·0	18	36·3																			0 63	0 71	0 18	3	28		0	2	0
Penticton	49	29	119	35						67·0		1	95 0	16	41·0	3	30·9																			0 49		0 32	4	25		0	0	0
Pemberton Hatchery	50	20	122	33						64 1		3	91·5	11	10·5	4	32·1																			0 23		0 23	1	20		0	0	0
Prince Rupert	54	18	130	18	170	30·06	30·30	29·56	0·74	54·8		2	81·0	28	45·0	6	12 1		87	8	18	2	2	5	2	3	21	3	3	18	62	5·6	20·0	22 S	1 50		0 90	16	15		0	0	5
Quesnelle	52	59	122	30	1740					59 8	− 3·3	15	89·0	12	35 0	18	30·8																			1 11	0 35	0 13	10	21		0	0	0
Revelstoke	51	0	118	6	1476					61·0	− 0·2	10	93 0	19	38 0	27	32·1																			0 89	1 54	0 53	6	25		0	1	0
Rossland	49	5	117	18	3100					65·8		7	90·0	16	45·0	1 23	37·2																			0 30		0 18	3	24		0	1	0
Ruskin (Stave Falls)	49	16	122	23	125					63·6		1	90·0	20	43·0	16 28	26·3																			0 13		0 10	2	20		0	0	0
Stuart's Lake (Fort St. James)	54	28	124	12	2280					54·4	1·0	13	80·0	22	31 0	16	28·3																			0 22	− 1 03	0 08	5	26		0	1	0
Salmon Arm	50	42	119	35	1215					66·5	−	5	94 0	11	41·0	6	33 8																			0 59		0 35	3	28	1	1	0	0
Steveston (Garry Point)	49	21	123	17						59 8	− 0·6	15	78·5	11	10 0	27	21·9																			0 01	− 0 91	0 01	1	20		0	0	0
Swanson Bay	50	37	126	53						55·2		2	79·0	10	42 0	14	12·0																			3 60		0 85	13	18		0	0	0
Salt Spring Island	48	50	123	20						63·0		1	93·0	10	44·0	4	21·6																			0 00		0 00	0	31		0	0	0
Summerland	49	57	119	0	1100					69 5		1	92·5	16	48·0	1	26·0																			0 37		0 12	3	28		2		
Tobacco Plains (Elko)	49	1	115	5	2681					69 7	+ 1 3	15	98 5	18	44 0	1–6	31·1																			0 52	− 1 23	0 15	1	23		0	1	0
aTranquille	50	11	120	29		28 71	28·99	28·31	0·68	68·3		2	95·0	20	41 0	25	32·2		18	4	0	3	1	3	5	1	28	9	23	20	93				0 13		0 10	3	28		0	2	0
Vernon (Coldstream Ranch)	50	14	119	15	1575					67·8	+ 1·2	17	97·0	20	41·0	1	34·9																			0 98	0 23	0 50	5	26		0	0	0
Victoria	48	24	123	19	85	30·02	30·18	29·75	0·43	61·3	+ 1·0	18	86·7	10	45·3	27	20·2		65	2	0	0	0	0	0	20	26	7	1	18	62	11·3	28·0	21 W	0 01	0 38	0 01	1	20		0	0	0
Vancouver	49	17	123	5	136	30·03	30·20	29·77	0·43	62·8	0·0	10	87·3	10	46 2	1	20·1		65	3	1	0	2	11	11	2	9	7	9	8	62	1·3	10·0		0 21	− 1 11	0 13	3	28		0	0	0
Winter Harbour	50	32	128	3						56·5	0·6	15	78·0	11	40·0	3	14·5																			1 11	− 1 95	0 12	6	25		0	0	0
Wilmer	50	34	116	11						63·9	−	1	92 0	16	37 0	7	39·1																			0 36	−	0 19	3	28		0	0	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Greatest fall in month.	Days with .01 or more.	No. of fair days.	No. of aurora.	No. of thunder storms.	No. of hail storms.
SASKATCHEWAN—*Con.*				In.	in.	in.	in.																																	
Strassburg	51 5	101 56						65·6	—		91·0	13	40·0	10 26·6																			3 13		0 10	5	26	0	0	0
Scott (Hearts Hill)	51 59	109 30						63·1	—		91·8	13	38·0	23 30·7																			1 24		0 83	8	23	0	3	0
Wascana	53 6	109 29						62·2	—		86·0	21	38·0	2 26·5						0	2	4	6	2	5	7	5	0	31				2 02		0 85	6	25	0	0	0
Yorkton	51 11	102 29						61·9	—		89·0	15	15·0	11 26	24·2																		0 75		0 10	4	27	0	0	0
MANITOBA—																																								
Almasippi	49 14	99 20						68·4	+ 1·8	15	112·0	14	42·0	19 29·2																			1 21		0 73	0	30	5	26	0	5	0
a Aweme (St. Alban's)	49 12	99 33	1180	28·70	28·95	28·21	0·71	69·5	+ 2·0	25	107·0	31	42·0	12 32·1																			2 86		0 1·81	12	11	30	2	1	0
Brandon	49 51	99 57	1176					66·9	+ 2·3	22	100·5	31	39·8	12 30·4				1	0	2	6	3	9	1	1	2	29	34	93	1	11	16 S.E.	2 00		0 33	0	62	11	30	0	0	0
Birtle	50 25	101 1	1703																																					
Berens River	52 18	97 23	710					66·2			88·0	15	21·0	31 19·5						2	0	11	7	12	3	8	7	0	50				1 50		0 61	4	27	0	2	0
Carberry	49 52	99 20	1258					—			105·0	14																					1 80		0 68	7	26	0	1	0
Carman	49 31	98 0	872					69·1			100·0	15	47·0	12 28·0																			0 80		0 43	4	27	0	0	0
Cypress River	49 33	99 3	1232					67·1			101·0	15	31·0	13 28·0																			1 92		0 77	6	25	0	1	0
Hillview	49 55	100 33	1100					66·4	+ 2·2	25	101·0	14	41·0	12 26·0						3	1	11	10	5	13	10	33	4	93				2 53	0 47	1 20	8	23		6	0
Minnedosa	50 15	99 50	1620	29·88	30·11	29·11	0·70	66·0	+ 2·3	27	103·…	14	40·3	12 27·6				4	3	3	2	2	2	4	1	1	11	36	62				1 60	1 01	0 43	7	21	0	3	0
Morden	49 11	98 6	978					69·9			102·0	15	48·0	12 29·2																			1 11		0 81	5	26	0	3	0
Moose Horn Bay (Atikenville)	51 15	99 33									85·5	23	43·0	30																								1	2	0
Oakbank	49 57	96 42	740					66·1	2·1	15	91·0	14	45·0	12 25·5																			1 81	1 26	0 77	7	21	0	2	0
Pipestone	49 31	100 58	1400					62·9			85·0	28	41·0	30 21·8																			2 57		1 50	7	24	0	1	0
Portage la Prairie	49 57	98 17	830					67·2	+ 1·8	22	100·0	14	47·0	9 24·2																			1 16	0 66	0 45	7	24	0	0	0
Portage la Prairie (2)	49 56	98 17						72·6			99·0	17	50·0	11 24·2																			1 33		0 18	9	22	0	0	0
Pierson	49 11	101 5	1531					66·1	—		102·0	14	41·0	11 20·6																			0 87		0 50	3	28	0	0	0
Stony Mountain	50 10	97 14	803					66·2	- 0·9	30	97·0	15	25·0	10 23·7						1	3	0	4	14	2	18	20	0	62	11	IV		0 63	2 25	0 33	3	29	0	0	0
Swan River	52 6	101 15	1112					65·2	—		93·0	14	43·0	10 25·2																			1 30		0 61	7	23	0	0	0
Treherne	49 36	98 40	1212					68·0	+ 6·9	11	101·0	14	46·0	12 25·2																			1 84		1 06	6	25	1	5	2
Virden	49 51	100 55	1411					66·8			96·0	11	42·0	11 27·0																			0 45		0 25	2	25	0	0	0
Winnipeg	49 53	97 7	760	29·88	30·20	29·18	0·72	68·7	2·8	37	95·5	14	47·4	30 26·3				1	1	6	0	3	9	9	0	2·…	9	1	62				0 80	2 53	0 28	7	24	0	1	0
ONTARIO—																																								
Alton	43 51	80 5	1250																																					
Aurora	43 57	79 24	886					68·1			89·0	12	42·5	5 25·3																			2 36	0 21	1·85	8	23	0	5	0
Agincourt	43 47	79 16	580					70·1	+ 1·3	14	97·2	9	49·0	5 24·5				1	2	32	9	8	9	2	18	11	29	2	93				2 10	+ 0 17	0 77	7	23	0	7	0
Barrie	44 23	79 41	820					68·1	0·9	35	94·1		46·9	5 21·8				3	0	32	6	1	3	2	16	5	23	24	93	3	111	30 N.W.	1 95	- 0 20	0 81	10	21	1	4	0
Beatrice	45 8	79 20	800					63·6	1·0	35	87·0		43·0	19 29 21·6				1	2	10	0	0	1	8	1	2	18	50	93	1	11		2 10	- 0 17	0 83	8	23	0	1	1
Bruce Mines	46 18	83 55	595					66·0	+ 1·5	12	90·0		43·0	1 25·3																			3 05	- 0 73	1 54	8	23	0	1	0
Birnam	43 2	81 55	690					70·2	+ 1·8	27	92·2	9	47·7	18 21·5						13	5	6	8	12	8	0	6	1	62				6 17	+ 3 37	3 33	8	23	0	8	1
Brantford	43 10	80 21	750					70·5	+ 0·1	22	95·0	9	43·0	1 25·8																			2 40	+ 3 02	1 93	6	25	0	6	2
Bloomfield	43 59	77 21	390					69·9	+ 0·1	10	91·0	10	52·0	31 21·0																			2 46		0 70	9	22	0	2	0
Bancroft	45 1	77 50						65·1	+ 0·6	19	89·5	9	42·0	1 28·6																			1 50	1 70	0 77	3	28	0	1	0
Copper Cliff	46 30	80 59						67·3			89·5	9	46·5	1 25·1																			2 91		1 37	8	23	0	0	0
Clinton	43 32	81 37						67·7			89·5	10	45·0	19 23·7						5	5	3	3	12	4	9	21	0	62				2 14		0 81	11	20	0	6	1
Coldwater	44 38	79 40	600					65·1	+ 1·8	23	92·0	9	39·0	5 31·2																			2 05	0 71	0 85	4	27	0	0	0
Cottam	42 7	82 45	695					71·2	0·2	23	95·0	9	47·0	18 28·0						14	1	3	2	19	9	11	0	0	62				2 49	0 18	1 25	7	24	0	3	2
Chatham	42 23	82 12	595					72·7	+ 1·8	25	97·0	9	50·0	6 19·2	7																			2 08	- 0 16	0 70	5	26	0	0	0
Cochrane	49 2	81 0		29·85	30·20	29·17	0·82	63·5			89·4	7	31·0	4 26·6						2	4	1	2	4	11	5	11	22	62				1 13		0 88	2	15	0	3	0
Collingwood	44 31	80 2																																						
East Toronto	43 35	79 18						68·2			90·0	9	51·0	17 22·0																			1 14		1 02	8	23	0	8	0
Elora	43 41	80 24	1271					67·1	+ 0·5	13	91·5	10	29·5	1 28·9																			1 60	+ 2 29	1 28	10	21	0	6	0
Gravenhurst	44 54	79 20	771					66·2	- 0·7	38	89·0	2·8·1	43·0	5 25·6				3	0	30	2	13	7	20	7	16	8	10	93	11	III		2 90	+ 0 88	1 16	9	22	3	7	0
Guelph	43 33	80 16	1050					69·0	+ 1·1	21	93·0	9	49·0	11 24·1																			2 01	- 0 41	0 75	10	21	0	4	0
Grimsby	43 13	79 36	282					72·2	—		95·0	3	50·0	11 24·1																			3 81		1 10	11	20	0	0	0
Huntsville	45 19	79 8																																						
Haileybury	47 29	79 39	687	29·85	30·24	29·18	0·76	66·6	+ 1·6	19	87·6	6	41·0	4 20·5						17	0	1	1	5	18	3	9	8	62	11	IV		3 17	+ 0 31	0 64	17	11	5	10	0
Hamilton	43 16	79 54	303					72·7	+ 2·9	26	95·0	9	51·0	18 29·1																			1 81	+ 2 71	1 19	12	19	0	4	0
Haliburton	45 1	78 28	1050					66·2	+ 0·7	23	93·0	6	40·0	11 28·7																			3 01	- 0 16	1 40	5	26	1	6	0
Kenora	49 18	94 32	1102					72·2	+ 5·1	11	91·0	3	50·0	28 20·1																			0 05		0 03	2	29	1	2	1

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with '01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
NEW BRUNSWICK—	° ′	° ′																																					
Bathurst	47 39	65 42	15																																				
Chatham	47 3	65 29	21	29·83	30·26	29·46	0·80	66·6	0·1	36	92·0	10	16·0	5	20·5			6	0	0	6	8	2	2	13	30	1	0	62				3·84	+0·12	1·13	13	18	0	1	0
Dalhousie	48 4	66 22	39					63·9		30	90·0	12	47·0	5	16·9					0	0	6	2	1	0	9	0	12	30				1·49		1·39	3	28	0	0	0
Fredericton	45 57	66 36	161	29·85	30·21	29·46	0·78	66·1	+ 0·1	36	89·0	11	43·9	5	23·1		75	6	3	2	10	18	1	6	5	37	13	1	93	7·3	12 7	11 W	1·70	+1·08	2·67	12	19	0	4	0
Grand Manan	44 47	66 46	49	29·88	30·19	29·51	0·68	62·6	+ 1·0	26	80·6	11	48·0	13	15·3			7	3	1	4	3	6	4	19	9	3	10	62				0·74	−3·51	0·29	5	26	1	2	8
Moncton	46 9	64 45	50					66·3	+ 1·0	13	89·0	10	47·0	14	21·4					0	2	1	2	2	4	16	10	0	31				4·35	+1·37	2·05	13	18	0	2	6
*Point Lepreaux	45 4	66 28	30					57·5	+ 1·9	32	67·0	6 19	52·0	1 29				1	4	6	5	5	5	21	16	18	0	78				3·97	−0·89	1·28	5	26	0	2	17
St. John	45 17	66 4	70	29·87	30·20	29·48	0·72	61·2	0·1	37	76·5	26	49·7	5	12·5			1	5	2	8	30	4	1	3	5	2	62				3·88	0·98	1·81	11	20	0	6	7
St. Stephen	45 11	67 16	35																																				
Sussex	45 38	65 38	69					66·1	+ 1·4	13	85·0	9	47·0	2 16	21·0					0	2	0	1	0	9	6	2	11	31				2·30	0·17	0·70	8	23	0	3	0
NOVA SCOTIA—																																							
Halifax	44 39	63 36	88	29·88	30·19	29·55	0·64	66·0	+ 1·1	36	86·3	12	47·8	2	19·6					1	9	3	2	3	13	32	6	0	62				5·36	+1·80	2·20	10	21	0	1	3
Port Hastings	45 39	61 22	45					63·5		18	90·0	10	41·0	2	21·1					0	0	0	7	5	11	5	3	0	31				5·58	+0·92	1·65	11	20	0	0	0
Parrsboro	45 23	64 19	40					62·7	+ 0·2	15	80·5	10	45·0	30	18·9																		1·65		2·10	11	20	0	0	0
Sydney	46 10	60 10	35	29·83	30·17	29·45	0·72	65·3	+ 1·7	37	85·5	10	45·3	1	17·6			8	15	6	2	4	2	2	20	15	7	1	62				3·82	+0·65	0·72	13	18	0	0	0
*Sable Island, E. Point	43 58	59 46	25					61·5	+ 1·6	27	69·0	22	52·0	10						0	0	0	14	0	57	6	12	4	93				1·11	+0·75	1·40	5	26	0	0	23
Truro	45 22	63 18						66·1	+ 2·1	37	89·0	10	45·3	13	20·9			6	1	2	8	2	2	19	29	12	7	12	93				3·42	+0·35	1·46	12	19	0	2	6
Windsor	44 59	64 6	90					65·5		8	88·0	11	47·0	2	20·7					3	3	7	7	14	53	4	2	0	93				1·71		1·05	10	21	0	1	0
*Whitehead	45 15	61 8	20					58·5	+ 1·4	29	68·0	15	52·0							3	3	2	1	1	4	26	1	21	62				1·36	+1·18	1·36	7	21	0	0	16
*aWolfville	45 7	64 20		29·77	30·07	29·43	0·64	65·8	+ 0·2	11	84·0	11 25	50·0	2	18·4					3	3	2	1	1	4	26	1	21	62				3·57	+1·29	1·55	10	21	0	1	3
Yarmouth	43 50	66 2	65	29·90	30·19	29·60	0·59	61·7	+ 0·8	30	71·5	14	48·3	15	15·8					4	2	9	1	21	13	8	7	3	62				1·91	−1·90	0·72	10	21	0	2	13
P. E. ISLAND—																																							
Charlottetown	46 14	63 10	38	29·86	30·21	29·49	0·75	66·9	+ 1·3	35	81·0	11 27	51·0	2	15·7					3	7	3	5	8	28	5	1	2	62				3·27	+0·44	1·23	15	16		3	0
Charlottetown (2)	46 13	63 10	75					66·6		1	84·5	10	50·0	3	16·0																	3·11		1·23	15	16	0	0	0
Hamilton	46 25	63 48						67·5	+ 2·9	13	85·0	23	51·0	3	18·9					3	1	0	2	2	11	9	0	0	31				2·28		1·25	4	27	0	0	0
NEWFOUNDLAND—																																							
*Amour Point	51 28	56 51																																					
Burin	47 0	55 10	27	29·90	30·30	29·55	0·75	58·0		1	76·0	11	46·0	1	8·4					4	3	1	0	26	12	8	8	0	62				5·87		1·88	15	16	0	1	7
*Cape Norman	51 38	55 52						48·1	2·0	26	60·0	3 31	43·0	11 21						2	16	6	10	2	5	26	26	0	93				5·18	+2·52	1·23	10	21	2	0	13
*Point Rich	50 42	57 25	35					51·0	0·8	26	68·0	31	42·0	6						3	4	24	2	13	33	13	1	0	93				3·25	−0·35	1·10	6	25	0	0	7
Port aux Basques	47 35	59 10	27	29·81	30·23	29·45	0·78	56·8		2	72·5	10	43·5	1	11·1					2	1	39	3	0	3	12	8	1	62				3·28		0·65	17	14	0	1	12
St. John's	47 31	52 42	125	29·82	30·26	29·41	0·85	62·2	+ 3·3	38	82·0	10-15	45·0	3	17·0			5	2	2	2	5	1	5	30	9	2	0	62				3·89	+0·27	0·92	11	17	0	3	0
BERMUDA—																																							
Prospect	32 17	64 30	151	30·23	30·38	30·10	0·28	78·1	− 0·4	19	85·8	31	70·0	9 16	10·0					0	0	0	1	11	17	2	0	1	62				1·18	−2·36	0·49	10	21	0	6	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING JULY, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
	in.			in.		in.		in.		
BRITISH COLUMBIA—										
Alberni										
Annis	1·36	6	25	0·89	22					Thunder on 16, 22.
Beaver Lake	0·6	1	30	0·06	21					
Coquitlam	R	0	31	R	22					
Denman's Island	0·03	1	30	0·03	1					
Ferguson	0·87	4	27	0·35	15					Thunder on 15, 21.
Goldstream Lake	0·02	2	29	0·01	1-22					
Grand Forks	0·08	4	27	0·03	22					Thunder on 17.
Hornby Island	0·00	0	31	0·00	—					
Jordan River	0·13	2	29	0·03	30					
LittleQualicum(French Creek, V.I.)	0·10	1	30	0·10	2					Thunder on 2.
Monte Creek	0·42	4	27	0·21	7					
Naas Harbour	2·50	13	18	0·59	22					
Sooke	0·00	0	31	0·00	—					
Skidgate	1·02	11	20	0·22	14					
ALBERTA—										
Bardo	1·81	5	26	0·79	15					
Bismark	1·19	5	22	0·68	10					
Bruederheim	2·17	9	22	0·68	11					
Bittern Lake	0·95	12	19	0·35	15					
Bantry										
Brooks	0·47	2	29	0·41	23					
Conjuring Creek	2·43	6	25	0·63	15					Thunder on 23, 30.
Coutts	0·25	2	29	0·20	2					
Campsie	4·05	19	12	1·17	15					Thunder on 2, 3, 9, 13, 15, 16, 17, 19, 20, 30, 31. Fog on 2, 11, 16, 30, 31.
Dorenlee	1·35	3	28	0·80	15					
Elkwater	1·53	8	23	0·39	23					Electrical Storm on 2nd (Severe).
Grassy Lake	0·50	1	30	0·50	3					
Jumping Pound	0·28	7	24	0·08	8					Thunder on 3, 17.
Josephsburg										
Kimball										
Lacombe	1·11	7	24	0·40	10					
Langdon	0·32	3	28	0·20	7					
Loch Sloy	0·31	3	28	0·15	8					Thunder on 1. Aurora on 5.
Macleod	0·15	1	30	0·15	8					
Mayton										
Okotoks	0·31	5	26	0·17	8					Thunder on 4, 27.
Ponoka	1·61	10	21	0·60	10					
Sion	4·96	22	9	1·12	23					Thunder on 6, 8, 13.
Wabamun										
SASKATCHEWAN—										
Elm How	0·00	0	31	0·00	—					
Hanley	1·70	1	27	0·51	4					
Last Mountain	0·94	4	27	0·55	3					Thunder on 3, 8 23
Maple Creek	1·62	8	23	0·46	11					Thunder 1, 3.
Kindersley	0·99	9	22	0·71	10					Thunder on 2, 17, 26. Fog on 16, 29.
MANITOBA—										
Cartwright	1·14	8	23	0·73	22					Thunder on 4, 11, 15, 18, 22, 23, 27, Aurora on 5.
Deloraine										
Gretna	0·81	3	28	0·18	23					Thunder on 5.
Norquay	1·96	6	25	0·76	21					Thunder on 16, 23, 31.
Rapid City	1·44	3	28	0·88	23					Thunder on 23, 27 30.
ONTARIO—										
Arden	2·87	9	22	1·18	28					Thunder on 10, 23, 25, 28.
Deer Park	3·40	7	24	1·12	25					Thunder on 16, 23, 29.
Dutton	4·15	4	27	1·50	21					
Emsdale	2·18	12	19	0·67	16					Thunder on 20, 21, 22, 24, 27.
Ennismore										
Goderich	1·50	6	25	0·40	10					
Georgetown	4·98	10	21	1·31	16					Thunder on 10, 12, 16, 21, 22, 23, 24, 27, 29.
Grantham	4·88	10	21	1·13	24					
Grand Valley	3·51	9	22	0·83	16					
Lansdowne										
MacCue	2·19	1	27	0·70	12-27					
Orangeville	3·78	6	25	1·02	10					Thunder on 23, 26.
Princeton	5·82	5	26	1·75	10					Thunder on 10, 12, 22.
Sydenham	2·60	6	25	0·85	12					
Strathroy	3·87	7	24	1·31	24					
Watford	6·38	4	27	4·80	24					
Westport	1·17	5	26	0·35	27					Thunder on 9, 10, 20, 21, 22, 27.
Wooler	1·89	7	24	0·85	16					Thunder on 24, 27, 29.
Westminster	5·76	5	26	2·77	24					Thunder on 12, 21, 24, 27, 29.
Wiarton	1·01	6	25	0·26	9					Thunder on 6, 9, 15, 21, 27, 29.
Wesley	1·27	9	22	1·14	11					Thunder on 21.
QUEBEC—										
Timiskaming	1·37	12	19	0·43	23					
NEW BRUNSWICK—										
Point Escuminac	3·53	12	19	1·25	4					Thunder on 25.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF JULY, 1900.

STATIONS.	Hours Ending																		
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria			11	61	73	82	86	92	93	96	98	93	93	89	83	52		
Nanaimo			29	67	69	71	80	88	87	92	88	88	84	84	76	61		
Vancouver		02	25	55	56	55	61	69	78	86	81	84	82	83	86	71	17	
Agassiz				33	34	58	59	61	67	71	80	81	90	83	67	27		
Tranquille			52	72	71	71	80	84	91	85	84	88	84	77	71	61	19	
Summerland		27	86	91	88	92	96	93	90	83	82	78	73	71	72	47		
Kamloops		13	47	66	71	76	85	84	91	91	82	80	85	72	69	47	09	
Edmonton		21	47	52	54	55	65	69	68	69	69	66	61	68	55	50	21	
Lethbridge		26	57	71	79	86	87	90	93	90	93	92	90	84	69	47	12	
Lacombe		08	42	59	63	70	76	77	77	73	77	81	76	78	81	70	36	
Medicine Hat		10	48	61	68	68	74	76	79	80	81	84	88	88	79	48	10	
Fort Vermilion																		
Battleford																		
Indian Head		02	36	55	61	67	76	76	74	77	74	74	77	74	75	51	08	
Moosejaw		28	65	70	78	79	82	81	81	81	78	79	77	78	81	71	16	
Dunvegan																		
Brandon		05	36	70	71	81	86	87	88	86	78	76	78	67	22			
Winnipeg		11	6	79	86	88	85	86	81	80	75	77	77	82	80	49	02	
Haileybury		12	15	43	53	59	67	61	66	68	69	73	67	62	51	18	05	
Gravenhurst																		
Woodstock			31	62	69	72	74	78	78	79	79	70	68	66	54	32		
Lindsay																		
Barrie			30	59	64	74	75	70	64	64	63	64	64	62	55	45	01	
Toronto			23	20	73	78	76	78	82	84	78	74	69	67	55	26	01	
Kingston		05	12	58	71	74	82	79	80	79	74	68	69	67	57	41	07	
Ottawa			21	53	68	76	76	71	70	71	69	71	68	64	54	24		
Montreal		08	25	46	57	69	66	70	70	76	70	65	52	31	24			
Quebec			20	46	57	64	65	69	72	72	64	63	62	65	53	27		
Sherbrooke																		
Fredericton		04	32	51	55	62	64	59	55	59	64	59	58	56	57	46	09	
Charlottetown		06	49	62	66	71	71	76	75	74	72	75	75	64	51	37	06	
Truro																		

	Victoria.	Nanaimo.	Vancouver.	Agassiz.	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw.	Dunvegan.	Brandon.	Winnipeg.	Haileybury.	Gravenhurst.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa.	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottet'wn.	Truro.
Registered duration in hours	351	325	313	258	342	362	332	276	382	325	292			298	349		289	311	296		283		251	271	291	295	226	248		246	288	
Percentage of possible duration	72	67	61	53	69	73	67	55	72	66	66			60	71		59	60	55		61		51	59	63	54	55	52		52	61	
Difference from average	+11			+9										+ 5			+3	+13			+8		−2	−1	+6	+4	−1			2		
Maximum percentage in one day	89	87	91	78	91	90	93	94	92	95	93			93	96		78	89	92		91		87	86	95	90	100	81		96	96	
Date of maximum	27	19	10	1	8	25	8	18	13	18	9			12	28		14	28	1		25		5	13	11	28	5	29		11	12	
No. of days completely clouded	0	0	0	1	1	0	1	1	0	0	0			0	0		0	0	0		1		0	0	1	1	1	0		2	1	

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the jeeblest in brilliancy.

3. Haliburton.

4. Shawinigan Falls, Hillsdown, II; Halkirk, Waitefield, III; Esterhazy, III; Waseca, Aitkensville, II; Lucknow, IV; Madoc, II; Gravenhurst, I; Haileybury, II; Okanagan Mission, Salmon Arm, Quebec, III ; Father Point, III ; Toronto, III ; Barrie, IV.

5. Gatesgarth, II; Melfort, IV; Crescent Lake, IV; Parry Sound, III; Montreal, I.

6. Haileybury, III.

7. St. Albans, II.

9. Treherne, III.

13. Haileybury, III.

19. Waitefield, II.

28. Lucknow, IV; Madoc, IV; Gravenhurst, IV; Haileybury, III; Grand Manan, III; Quecec, III.

29. St. Albans, III; Montreal, III.

30. Haileybury, IV.

31. Gravenhurst, IV.

Thunder recorded :

1. Loch Sloy, Maple Creek, Alix, Hillsdown, Halkirk, Athabasca Landing, Waitefield, Esterhazy, Foxleigh, Melfort, St. Peter's Monastery, North Gower, Chilcoten, Princeton, Salmon Arm.

2. Campsie, Kindersley, Hillsdown, Halkirk, Loveland, Threehills Creek, Waitefield, Foxleigh, East End, Chaplin, Rathmullen, Saskatoon, Oliver, Bruce Mines, Montague, North Gower, Crescent Lake, Haileybury, Little Qualicum, Alberni, Chilcoten, Okanagan Mission, Quebec, Charlottetown, Truro.

3. Campsie, Jumping Pound, Last Mountain, Maple Creek, Shawinigan Falls, Threehills Creek, Wetaskiwin, Waitefield, Foxleigh, East End, Chaplin, Duck Lake, St. Peter's Monastery, Gatesgarth, Melfort, Rathmullen, Saskatoon, Oliver, Copper Cliff, Lake Edward, Windsor, Crescent Lake, Ottawa, Montreal.

4. Okotoks, Cartwright, Brownlee, St. Peter's Monastery, Saskatoon, Carberry, Haliburton, Pt. Lepreaux, Sussex, Moncton, Wolfville, Grand Manan, St. John, N.B., Halifax, Yarmouth, Charlottetown, Truro. Fredericton.

5. Gretna, Foxleigh, St. Peter's Monastery, Govan, Saskatoon, Hillview, Aitkensville, Almasippi, Oakbank, Morden, Crescent Lake, Winnipeg, Berens River.

6. Sion, Wiarton, Alix, Pakan, Esterhazy, Foxleigh, Saskatoon, Oliver, Almasippi, Bruce Mines, Brantford, Kakabeka Falls, Crescent Lake.

7. Chaplin, Saskatoon, Oakbank, Lucknow, Ursa, Gravenhurst, Haileybury, Minnedosa.

8. Sion, Last Mountain, Cannington Manor, Chaplin, Saskatoon, Bruce Mines, Kakabeka Falls, Crescent Lake, Haileybury, Hope.

9. Campsie, Westport, Wiarton, Halkirk, Waitefield, Cannington Manor, Chaplin, Bruce Mines, Brantford, Clinton, Birnam, Lucknow, Owen Sound, Montague, Paris, Madoc, Chicoutimi, Crescent Lake, Gravenhurst, Haileybury, Barrie.

10. Arden, Georgetown, Princeton, Westport, Shawinigan Falls, Esterhazy, Beatrice, East Toronto, Haliburton, Brantford, Clinton, Lucknow, Montague, Madoc, Kakabeka Falls, Ursa, Brome, Lake Edward, Guelph, Haileybury, Lindsay, London, Kingston, Ottawa, Port Arthur, Quebec, Father Point, Southampton, Toronto, Barrie.

11. Cartwright, Chilcoten.

12. Georgetown, Princeton, Westminster, Macleod, Waitefield, Agincourt, East Toronto, Cottam, Clinton, Birnam, Lucknow, Owen Sound, Montague, Paris, Madoc, Kakabeka Falls, Port Dover, Schreiber, Tobacco Plains, Port Arthur, Port Stanley, Southampton, Toronto.

13. Campsie, Sion, Cottam, Paris, Kingston, Port Stanley, Father Point. Barrie.

14. Father Point.

15. Campsie, Cartwright, Wiarton, Peace River Crossing, Esterhazy, Foxleigh, Estevan, Cannington Manor, St. Peter's Monastery, Carberry, Aurora, Schreiber, Crescent Lake, Gravenhurst, Ferguson, Okanagan Mission, Salmon Arm, Summerland, Fredericton.

16. Campsie, Norquay, Deer Park, Georgetown, Halkirk, Blairmore, Loveland, Paken, Threehills Creek, Hillview, Treherne, Almasippi, Agincourt, East Toronto, Lucknow, Midland, Minnedosa, Annis, Parry Sound, Southampton, Toronto, Barrie.

17. Campsie, Jumping Pound, Kindersley, Halkirk, Pakan, Threehills Creek, Wetaskiwin, Waitefield, St. Peter's Monastery, Rathmullen, Almasippi, Grand Forks.

18. Cartwright, Cannington Manor, Hillview.

19. Campsie.

20. Campsie, Emsdale, Westport, Haliburton, Birnam, Copper Cliff, Uplands, Ursa, Haileybury.

21. Emsdale, Georgetown, Westport, Westminster, Wiarton, Wesley, Oliver, Agincourt, Beatrice, East Toronto, Halibnrton, Hamilton, Brantford, Clinton, Lucknow, Brome, Lake Edward, Gravenhurst, Haileybury, Ferguson, Chilcoten, Chilliwack, North Nicomen, Okanagan Mission, Princeton, Revelstoke, Salmon Arm, Summerland, Hope, Rossland, Nicola, Kingston, Ottawa, Southampton, Toronto, Montreal.

22. Cartwright, Emsdale, Georgetown, Princeton, Westport, Lacombe, Shawinigan Falls, Lethbridge, Halkirk, Cottam, Athabasca Landing, Pakan, Wetaskiwin, Waitefield, Foxleigh, St. Peter's

Monastery, Saskatoon, Oliver, Agincourt, Beatrice, East Toronto, Haliburton, Aurora, Owen Sound, Madoc, Uplands, Brome, Lake Edward, Pt. Lepreaux, Haileybury, Annis, Golden, Ottawa, Port Stanley, Quebec, Grand Manan, Southampton, Montreal, St. John, N. B.

23. Last Mountain, Cartwright, Norquay, Rapid City, Arden Deer Park, Georgetown, Orangeville, Harmattan, Cannington Manor, Chaplin, Saskatoon, Oliver, Hillview, Carberry, Treherne, Lucknow, Kakabeka Falls, Schreiber, Chicoutimi, Lake Edward, Moncton, Guelph, Quesnel, Ottawa, Parry Sound, St. John, N. B.

24. Emsdale, Georgetown, Wooler, Westminster, Alix, Hillsdown, Halkirk, Peace River, Three Hills Creek, Waitefield, St. Peter's Monastery, Saskatoon, Oliver, Agincourt, Beatrice, East Toronto, Aurora, Bruce Mines, Hamilton, Bloomfield, Brantford, Clinton, Birman, Lucknow, Owen Sound, Midland, Madoc, Kakabeka Falls, Port Dover, Peterboro, Schreiber, Gravenhurst, Haileybury, Lindsay, London, Kingston, Ottawa, Port Arthur, Port Stanley, Quebec, Southampton, Toronto, Montreal, Barrie.

25. Arden, Point Escuminac, Harmattan, Uplands, Lake Edward, Sussex, Moncton, Kingston, Ottawa, Port Stanley, Chatham, N.B., Montreal, St. John, N.B., Fredericton.

26. Kindersley, Orangeville, Saskatoon, Oliver, Owen Sound, Kakabeka Falls, Port Arthur, Charlottetown.

27. Okotoks, Cartwright, Rapid City, Emsdale, Georgetown, Westport, Wooler, Westminster, Wiarton, Shawinigan Falls, Cannington Manor, Hillview, Aitkenville, Treherne, Agincourt, Beatrice, East Toronto, Aurora, Bruce Mines, Bancroft, Hamilton, Bloomfield, Brantford, Birnam, Copper Cliff, Lucknow, Midland, Montague Madoc, North Gower, Port Dover, Peterboro, Uplands, Brome, Sussex, Moncton, Gravenhurst, Lindsay, Kingston, Ottawa, Parry Sound, Port Stanley, Quebec, Southampton, Toronto, Montreal, Fredericton.

28. Arden, Waitefield, Midland, St. John, N.B., Yarmouth.

29. Deer Park, Georgtown, Wooler, Westminster, Wiarton, Lethbridge, Hillsdown, Halkirk, Three Hills Creek, Waitefield, Agincourt, East Toronto, Haliburton, Aurora, Hamilton, Brantford, Clinton, Birnam, Owen Sound, Paris, Madoc, Port Dover, Peterboro, Uplands, Gravenhurst, Haileybury, Lindsay, London, Chilcoten, Salmon Arm, Kingston, Port Stanley, Southampton, Toronto, Berens River.

30. Campsie, Rapid City, Hillsdown, Halkirk, Harmattan, Loveland, Three Hills Creek, Waitefield, Foxleigh, Hillview, Carberry, Treherne, St. Albans, Peterboro, Brome, Lake Edward, Crescent Lake, Lindsay, Chilcotin, Kingston, Ottawa, Quebec, Father Point, Montreal.

31. Campsie, Norquay, Harmattan, Pakan, Waitefield, St Peters Monastery, Treherne, Kakabeka Falls, Minnedosa, Chilcotin, Quesnel, St. John, N. B.

FORECASTS FOR JULY, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1279. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	78	57	16	5	83·3
Saskatchewan	77	58	11	5	81·1
Manitoba	78	66	10	2	91·0
Lake Superior	102	77	21	1	85·8
Georgian Bay	125	101	17	4	90·0
Lower Lake Region	125	108	12	5	91·2
Ottawa Valley	109	91	17	1	91·3
Upper St. Lawrence	109	92	15	2	91·3
Lower St. Lawrence	116	90	23	3	87·5
Gulf	116	85	29	2	85·8
Maritime Provinces West	122	89	21	9	82·8
Maritime Provinces East	122	87	26	9	81·9
Total	1279	1001	221	51	87·2

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
August, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

DEC 2 1910
UNIVERSITY OF TORONTO.

Monthly Weather Review.

VOL. XXXIV. AUGUST, 1910. No. 8.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

The mean temperature for the month of August was below normal in the Province of British Columbia. High temperatures, at some places exceeding 90°, were recorded during the first week and again about the 18th, but a general frost occurred about the 23rd or 24th when considerable damage was occasioned to garden produce. Little or no rain fell upon Vancouver Island, but in the central districts of the Lower Mainland rather more than the normal amount was registered. Elsewhere in the province the precipitation was much less than the normal for August. The fruit crop benefited from the rain in the central mainland and a heavy crop was expected everywhere, from prospects at the end of the month.

The first fourteen days were seasonably warm in Alberta, but the rest of the month with the exception of the 18th to the 20th was cool. In several districts on the 23rd the temperature did not exceed 50°. From 2° to 5° of frost were registered on the 23rd, 24th, 25th, 27th and 30th. Except in the southwestern districts, where there were local deficiencies, the rainfall was considerably in excess of the normal amount for August.

In Saskatchewan much the same conditions prevailed as in Alberta. The first two weeks were warm with the exception of the 8th and 9th, while the remaining days were cool with the exception of the 20th and 21st, which were, apparently, the warmest days of the month. The mean temperature varied from 2° to over 6° below the normal, the greatest difference from normal occurring at Qu'Appelle. Frosts occurred on the 17th, 25th, 27th, 30th and 31st. In the southern districts the precipitation was very heavy. Rain fell on fourteen days at some stations, and more than an inch fell during the last three days at Moosejaw. During the early part of the month the rainfall materially improved the crops, but towards its close harvesting operations were delayed by the rainy weather in both Alberta and Saskatchewan.

In Manitoba also the mean temperature of the month was for the most part below normal, although the differences from normal were not so marked as in the two more westerly provinces. For the most part the mean temperature was about 1° below the normal in eastern Manitoba and between 2° and 3° below in the western districts. Temperatures exceeding 90° were recorded on the 11th, 12th, 19th, 20th and 21st, but frosts occurred from the 26th to 31st. The rainfall was less than the normal over the greater part of the province, but locally in the central-southern districts the normal was exceeded, due to a very heavy fall of rain during a thunderstorm on the 29th. Grain cutting was not quite finished at the end of the month. The grain was reported half a crop on the average, hay scarce, pastures poor and many ponds dry.

In Ontario the mean temperature for August was above the normal in the Georgian Bay and Lake Huron counties and the counties between the Georgian Bay and the Ottawa River as far as Renfrew. Immediately along the shore of Lake Erie there was a slight excess over normal. In the remainder of Old Ontario, viz, the counties of Essex, Middlesex, Oxford, Brant, Wentworth, and those bordering on the eastern portion of Lake Ontario and the Upper St. Lawrence, the mean temperature was below the average of twenty years. In the districts of New Ontario, north of Lake Superior, the normal temperature was barely exceeded.

In the districts to the west of Lake Superior, the rainfall was deficient, as was also the case in portions of the counties of Grey, Dufferin, Simcoe, Essex, Middlesex, Oxford, Brant and Wentworth. Elsewhere in the province of Ontario the rainfall was in excess of the normal August quantity, and in the north-central counties and the Indian Peninsula there were very heavy local falls of from 5 to 6 inches

In the western portion of Quebec the mean temperature of the month was either normal or less than 1° above, but in the Gulf counties the excess over normal was greater, reaching more than 2° at Father Point. The rainfall was less than normal over the greater part of the province, excess over normal occurring only in the Abitibi region and locally in the counties lying to the north of the Lower St. Lawrence. The heaviest rainfall occurred about the 4th and 18th. Crops in general were reported very good from the country near Quebec city, but fruits and potatoes were regarded as less than a normal crop.

In the counties of New Brunswick fronting on the Bay of Fundy, also in the vicinity of the Bay of Chaleur, in the most southerly counties of Nova Scotia and in Prince Edward Island, the mean temperature of August was above the normal from 0·5° to 1°. Elsewhere in the Maritime Provinces less than the normal mean temperature was recorded. The rainfall was less than normal in Prince Edward Island, Cape Breton and central Nova Scotia, and on the north shore of the Bay of Fundy was either normal or below. In the greater part of New Brunswick, however, there was an excess of precipitation. In New Brunswick the greater part of the rainfall occurred on the 4th, 11th and 19th. A frost on the 30th did local damage to garden crops. But all crops were reported to have yielded abundantly and to be of excellent quality.

In Newfoundland the average temperature of the month was about 60° in the south-west districts and about 58° in the northerly districts. The rainfall was generally a little less than normal.

ATMOSPHERIC PRESSURE.

The atmospheric pressure was above the normal in mean value throughout the Dominion except in the Lake Superior district. The positive departures from normal were greatest in the Yukon and the far northern districts of British Columbia and Alberta, ranging from twenty to twenty-five hundredths of an inch. In Alberta and north-western Saskatchewan the normal was exceeded by about one-tenth of an inch, as was also the case in the greater part of the Maritime Provinces. Elsewhere in Canada the excess did not exceed five one-hundredths.

HIGH AREAS.

Six areas of high pressure were charted, two first appeared in the vicinity of the Yukon Territory, two on the British Columbia coast, one in Northern Alberta, and one in the North Pacific States coast. The systems all traversed the continent and eventually passed to the Atlantic Ocean either off the coasts of the Maritime Provinces or the New England States. Towards the close of the month the areas began to develop more pronounced energy than during the earlier summer season.

LOW AREAS.

Seven areas of low pressure were charted for the month, one first appeared to the northward of Alberta, three in British Columbia, two in the West Pacific States and one in the South Pacific States. The general course of the areas was over the Western Provinces of Canada thence far to the northward, some passing the Labrador Coast, others apparently breaking up in transit.

WINDS.

On Vancouver Island and over the mainland of British Columbia the south and west directions predominated, with twelve days with fresh but with few strong breezes.

In Alberta the direction was variable favouring slightly the north and west, with six days with strong and seven with fresh breezes.

In Saskatchewan the direction favoured somewhat the northwest, west and southwest points, with six days with fresh, but with few strong breezes.

In Manitoba the direction was variable but slightly in favour of the northwest, west and southwest, with six days with strong and eleven with fresh breezes and one moderate gale.

In the Lake Region the south and west directions were the most general with eleven days wit fresh breezes, but irrespective of moderate gales there were few strong winds. The gales occurred on the 4th and 25th.

In the Lower St. Lawrence Valley and the Gulf the south and west directions prevailed mainly with four days with strong and fourteen with fresh breezes and one moderate gale occurring on the 26th.

In the Maritime Provinces the direction was also for the most part southerly to westerly, although often variable, while the force of winds was generally from light to moderate, fresh breezes being infrequent.

The moderate gale experienced in the Lake Region on the 25th instant and in the Lower St. Lawrence Valley and the Gulf on the 26th was warned, but no warning was issued for the gale of the 4th, which was locally recorded on the Lakes.

TEMPERATURE.

In British Columbia the mean temperature was below the normal over the greater part of the province by from 1° to 3°. In Alberta and Saskatcewan the deficiency ranged 2° to 6°, the greatest difference from normal occurring in the southern districts. In Manitoba the mean temperature was also below the normal, and by 1° to 3°, but exception is to be made for the vicinity of Brandon, where there was apparently a slight excess over normal. In the Lake Superior districts of Ontario the normal temperature was barely exceeded, and in the counties of Essex, Middlesex, Oxford, Brant, Wentworth and those bordering on eastern Lake Ontario, the normal was not reached by from 1° to 2.5°. Elsewhere there was an excess of about 1° in this province. In Quebec the mean temperature ranged from average to 2° above. Less than the normal mean temperature was recorded in the Maritime Provinces, except locally, on the north shore of the Bay of Fundy, the Bay of Chaleur, and probably quite generally in Prince Edward Island.

The highest and lowest temperatures recorded in each Province during the month of July, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	97° at Hope on 18th.	22° at Hedley (Nickel Plate) on 22nd.
Alberta,	92° at Lethbridge on 1st.	16° at Blairmore on 24th.
Saskatchewan,	94° at Pense on 21st	23° at Rathmullen on 30th.
Manitoba,	97° at Morden on 12th	26° at Stony Mountain on 17th.
Ontario,	98° at Beatrice on 8th.	28° at White River on 29th.
Quebec,	85° at Cape Magdalen on 26th.	32° at Shawbridge on 30th.
New Brunswick,	85° at Dalhousie on 25th.	33° at Sussex on 31st.
Nova Scotia,	88° at Port Hastings on 9th.	32° at Truro on 31st.
P. E. Island,	82° at Charlottetown on 14th.	42° at Charlottetown on 31st.

PRECIPITATION.

On Vancouver Island and part of the mainland of British Columbia, over the greater part of Manitoba, a portion of Ontario, the greater part of Quebec, Prince Edward Island, central Nova Scotia and the greater part of Cape Breton Island, the total rainfall for the month of August was less than the average amount for August for the last twenty years. Over the remainder of the Dominion the amount was in excess of the normal. In some districts in Alberta and Saskatchewan there were very heavy rainfalls towards the close of the month.

BRIGHT SUNSHINE

The amount of bright sunshine registered in Canada during the month of August was above normal in western British Columbia, locally in the Western provinces, in eastern Ontario and the Maritime Provinces, but was below the normal elsewhere. The deficiency was especially marked in Central Ontario, where the total record was from 20 to 30 per cent below normal

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, AUGUST, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

| STATION. | Latitude N. | Longitude W. | Elevation above sea level, in feet. | PRESSURE. | | | | TEMPERATURE. | | | |

| | | |

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, AUGUST, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with '01 or more	No. of rainy days.	No. of snowfalls	No. of days for which snow fell
SASKATCHEWAN *Con.*				In.	in.	in.	in.																																
Strassburg								60·2	—		89·0	23	29·0	30	21·1																								
Scott (Hearts Hill)	51	59	109	30				57·7			88·0	9	25·5	31	29·3																								
The Pas	101	15	53	19	860	29·91	30·21	29·14	0·77	56·8			80·0	18	30·0	27	21·8		90																				
Waseca	53	6	109	29						51·9			84·0	10	28·0	30	25·7																						
Yorkton	51	11	102	29				57·0			81·0	20	28·0	31	24·6																								
MANITOBA –																																							
Almasippi	49	14	99	20				66·0	—		89·2	11	28·0	28	20·1																								
aAweme (St. Alban's)	49	12	99	34	1180	28·71	29·08	28·37	0·71	62·7	— 1·6	25	91·5	19	30·5	28	31·5																						
Brandon	49	51	99	57	1176					61·2	+ 0·7	22	82·0	20	31·0	31	29·7			5	1	9	18	2	12	0	11	3	37	1	93	1	11	30 NW	1 01	0 57	0 15	9	12	6	0
Birtle	50	25	101	1	1703																																		
Berens River	52	18	97	23	710			56·6	—		81·0	18	30·0	18	30·6																								
Carberry	49	52	99	20	1258				—		69·1	19																											
Carman	49	31	98	0	872			61·2			79·1	12	32·0	30	26·6																								
Cypress River	49	33	99	3	1232			67·0			89·3	12	33·0	25	31·28·1																								
Hillview	49	55	100	33	1100			59·7	—1·2	25	91·0	20	30·0	31	27·2			3	2	13	10	5	11	11	5	7	21	1	93				0 63	1 02	0 10	4	5	3	1
Minnedosa	50	15	99	50	1680	29·91	30·33	29·53	0·80	58·6	2·7	27	86·0	20	30·0	31	28·0					1	1	1	5	0	0	0	11	43	62				1 73	0 39	54	9	5	5	0
Morden	49	11	98	6	978			63·7	—		96·7	12	35·0	28	28·1																								
Moose Horn Bay (Atikensville	51	15	99	33				58·8			87·0	30	28·0	27	25·9					13	5	6	7	5	3	8	6	9	62				2 17		0 79	10	11	6	0
Oakbank	49	57	96	42	710			59·5	1·2	15	87·5	11	31·7	31	24·7																								
Pipestone	49	31	100	58	1100			61·5			91·2	11	29·0	30	22·7																								
Portage la Prairie	49	57	98	17	830			61·3	2·4	19	92·0	11	33·0	27	28·5																								
Portage la Prairie (2)	49	56	98	17				61·4	—		91·5	12	35·5	28	28·4																								
Pierson	49	11	101	5	1531			52·6	—		83·0	22	30·0	26	28·5																								
Stony Mountain	50	40	97	14	803			59·5	0·9	30	93·0	12	26·0	17	31·4			2	6	7	9	5	1	1	8	14	14	0	62	2 0		5 30 W	3 12	1 11	1 00	5	5	0	0
Swan River	52	6	101	15	1112			58·7			89·0	20	31·0	26	26·9																								
Treherne	49	36	98	40	1212			62·0	+ 0·9	15	93·0	11	33·0	28	25·0																								
Virden	49	51	100	55	1444			59·1			91·0	28	30·0	30	30·7																								
Winnipeg	49	53	97	7	760	29·95	30·10	29·17	0·83	62·3	0·8	37	93·1	11	30·1	28	26·6					13	3	3	8	7	5	8	11	1	62				2 11	0 20	0 71	9	22	3	1
ONTARIO –																																							
Alton	43	51	80	5	1250			61·9	2·3	21	81·2	22	39·0	27	27·7			3	0	1	1	4	3	28	7	16	3	0	63	1	11	25 SW	1 31		1 26	11	5	0	2
Aurora	44	57	79	24	886			65·8			85·2	15	40·5	19	23·7																								
Agincourt	43	47	79	16	590			67·1	+ 0·1	14	84·1	25	47·6	27	20·1			5	6	3	0	25	8	10	12	23	9	3	93				2 51	+ 1 01	0 81	10	22	1	0
Barrie	44	23	79	41	839			65·0	2·0	32	81·5	13	45·2	20	18·0			5	0	1	8	5	10	14	6	5	14	27	93	11	IV	25 S	3 78	+ 1 65	0 70	13	17	8	0
Beatrice	45	8	79	20	800			63·8	1·8	35	98·0	8	39·0	20	22·1			5	7	6	0	0	10	21	7	3	10	36	93	1	III	25 S W	3 03	0 36	0 79	13	12	2	0
Bruce Mines	46	18	83	55	595			62·0	1·0	12	80·0	18	41·0	28	31·21·1																								
Birnam	43	2	81	55	600			66·2	+ 2·9	27	84·1	17	45·3	20	18·1					6	8	10	5	10	5	8	3	7	62				1 32	+ 1 82	1 08	10	17	6	1
Brantford	43	10	80	21	750			66·9	0·8	26	87·0	11	44·0	26	22·7																								
Bloomfield	43	59	77	21	260			66·7	1·2	10	87·0	16	48·0	27	19·6																								
Haneroft	45	1	77	50				62·9	+ 1·9	16	81·0	13	31·0	7	25·1																								
Copper Cliff	46	30	80	59				62·7			82·5	12	40·0	26	19·1																								
Clinton	43	32	81	37				65·9			86·0	15	42·0	20	21·20·9					9	1	9	2	15	7	8	11	0	62				3 70		1 61	11	9	5	1
Coldwater	44	38	79	40	600			62·1	0·7	23	81·0	21	38·0	33	28·2																								
Cottam	42	7	82	45	600			68·7	— 0·2	23	93·0	14	40·0	26	28·1					12	0	13	5	25	6	1	0	0	62				1 06	1 16	0 85	7	11	1	0
Chatham	42	23	82	12	595			69·9	+ 1·7	25	93·0	15	41·0	20	26·9																								
Cochrane	49	2	81	0	930	29·91	30·52		1·16	59·1	—		83·0	12	32·0	29	21·1			5	3	0	3	1	5	8	8	2	10	25	62				1 32		1 07	13	18	2	2
Collingwood	44	31	80	2				70·1	+ 5·3	15	96·0	21	50·0	19	25·21·2																								
East Toronto	43	35	79	18				65·6			82·0	11	46·0	27	20·1																								
Elora	43	41	80	24	1271			65·2	+ 1·7	13	86·0	16	41·0	28	24·9																								
Gravenhurst	44	51	79	20	770			63·1	+ 1·0	39	81·0	23	40·0	27	22·1			8		6	2	13	12	22	1	10	10	14	93	2 1		5 18 NW	1 21	+ 0 01	0 81	10	21	5	0
Guelph	43	33	80	16	1050			66·3	+ 2·0	23	85·0	14	45·0	13	21·0																								
Grimsby	43	13	79	36	282			67·8			89·0	26	48·0	27	20·1																								
Haileybury	47	29	79	39	697	29·95	30·41		1·00	62·6	+ 0·6	19	82·6	12	39·1	26	19·2			7	13	1	0	1	2	12	13	3	13	11	62	1 6		7 26 SW	2 91	+ 0 01	1 75	15	16	6	1
Hamilton	43	16	79	51	303			67·0	— 2·8	35	85·0	24	51·0	27	17·7																								
Haliburton	45	1	78	28	1050			63·1	+ 0·9	23	84·0	13	37·0	27	21·4																								
Kenora	49	48	94	32	1102			66·0	—		89·0	22	38·0	28	19·9																								

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, AUGUST, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely cloudod.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with '01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
NEW BRUNSWICK—																																									
Bathurst	47 39	65 42	45																																						
Chatham	47 3	65 29	21	30·01	30·13	29·18	0·95	61·5	— 0·1	36	81·5	25	40·0	31	20·9					0	6	1	1	6	21	17	7	0	62				3·11	0·02	0·56	11	20	0	0	0
Dalhousie	48 4	66 22	39					62·5	+ 1·4	31	85·0	25	40·0	29	20·1					0	0	8	0	0	12	0	11	31				0 61		0·50	9	22	0	0	0
Fredericton	45 57	66 36	161	30·06	30·13	29·19	0·91	63·1	+ 1·0	38	83·6	25	37·8	31	23·7		79	6	3	2	3	9	10	5	11	23	21	2	93	7·3	11·0	12 N W	1 55	+ 0 61	2 31	9	12	0	1	1
Grand Manan	44 47	66 46	49	30·05	30·38	29·54	0·84	62·7	+ 1·1	26	77·6	13 15	19 0	31	13·8					4	3	2	0	6	16	12	6	9	62				1 23		0 40	6	25	0	1	6
Moncton	46 6	64 15	50					61·6	+ 1·2	12	81·0	25	33·5	30	22·5					0	2	8	0	0	1	13	5	0	31				3 40	+ 0 33	1 75	6	25	0	1	0
*Point Lepreaux	45 1	66 28	30					58·2	+ 0·6	32	67·0	8 12	46·0	30	—					0	6	16	3	1	22	18	15	0	81	11	IV	26 W	2 83	+ 0 67	2 07	3	28	0	1	19
St. John	45 17	66 4	70					61·7	+ 0·5	37	78·0	15	47·7	30	12·6																		2 58	1 27	1 04	11	20	0	2	6
St. Stephen	45 11	67 16	35							12	82·0	13	36·0	31	—																						0	0	0
Sussex	45 38	65 38	69					61·3	1·5	13	80·0	11	33·0	31	22·0					0	3	0	2	0	1	2	2	17	30				1 37	1 21	1 02	2	20	0	0	0
NOVA SCOTIA—																																									
Halifax	44 39	63 36	88	30·07	30·38	29·65	0·73	61·2	— 0·4	36	81·2	11	39·2	31	20·3					2	10	1	1	6	5	12	15	0	62				2 69	— 1 81	0 98	7	24	0	0	2
Port Hastings	45 39	61 22	45					61·1		18	88·0	9	40·0	15	28·9					0	0	0	2	11	13	2	3	0	31				1 74	— 0 63		13	25	0	0	1
Parrsboro'	45 23	64 19	40					60·3	— 0·5	13	75·0	15	38·0	30	19·8																		2 14	0 50	0 77	5	26	0	0	0
Sydney	46 10	60 10	35	30·01	30·30	29·55	0·75	61·1	0·6	37	81·5	14	13·8	21	18·3					7	1	0	2	5	18	13	7	9	62				3 01	+ 0 25	0 98	8	25	0	0	0
*Sable Island, E. Point	43 58	59 46	25					63 1	0·5	27	72·0	11 20	57·0	16	—					2	8	0	14	0	23	0	30	0	93				2 51	2 16	2 40	12	20	0	0	2
Truro	45 22	63 18						62·6	1·8	36	82·8	2	31·8	31	24 1					9	12	2	7	7	27	14	1	21	93				2 78	0 90	1 39	8	23	0	2	5
Windsor	44 59	64 6	90					62·7	—	8	83·0	15	36·5	31	23·3																		1 32		0 77	8	23	0	0	0
*Whitehead	45 15	61 8	20					61·5	0·0	28	73·0	15	33·0	30	—					10	5	1	8	9	50	6	1	0	93				2 13	2 12	0 40	4	25	0	0	8
a Wolfville	45 7	64 20		29·96	30·28	29·50	0·78	62·6	1·8	11	83·0	14	38·0	31	19·8					3	2	2	4	3	5	21	4	15	62				3 01	1 52	0 70	8	25	0	0	4
Yarmouth	43 50	66 2	65	30·09	30 10	29·62	0·78	60·5	+ 0·3	30	75·1	17	38·7	31	16·5					1	3	1	1	11	20	7	7	5	62				1 69	+ 1 46	0 62	7	24	0	1	1
P. E. ISLAND—																																								
Charlottetown	46 11	63 10	38	30·05	30 38	29·55	0·83	65·5	+ 0·8	35	82 0	14	43·0	31	17·0					2	3	4	6	3	27	8	1	5	62				0 91	2 65	0 28	8	23	1	2	0
Charlottetown (2)	46 13	63 10	75					61 3	—	1	80·0	14	41·5	31	16·1																		1 09		0 32	10	21	0	0	0
NEWFOUNDLAND—																																								
*Amour Point	51 28	56 51						60·0		1	75·0	22	41·0	30	13·3					9	0	2	1	17	11	11	9	2	62				2 74		0 46	11	29	0	0	3
Burin	47 0	55 10	27	30·07	30·38	29·69	0·90	54·1	+ 0·7	27	66·0	26 28	44·0	19	—					1	21	3	6	2	5	20	32	0	93				2 91	0 53	0 76	9	22	0	0	7
*Cape Norman	51 38	55 52						57·9	+ 0·3	26	65·0	23	48·0	30	—					11	6	17	1	6	14	35	3	0	93				1 30	2 37	0 90	2	29	0	0	2
*Point Rich	50 42	57 25	35					58 9		2	69·0	2	43·5	31	10·5					1	3	20	5	4	4	12	10	3	62				2 22		1 01	9	22	0	0	3
Port aux Basques	47 35	59 10	27	30·03	30·33	29·59	0·74	58 9		2	69·0	2	43·5	31	10·5					1	3	20	5	4	4	12	10	3	62				2 22		1 01	9	22	0	0	3
St. John's	47 31	52 42	125	30 01	30·29	29 68	0·61	61 1	+ 1 8	38	77·0	2	40·0	10	11·9					8	0	1	0	6	21	21	4	1	62				3 06	— 0 19	0 80	14	17	0	0	0
BERMUDA—																																								
Prospect	32 17	64 30	151	30·20	30·35	30·03	0·32	80·5	+ 0·9	20	88 8	11	73·0	5-8	11 1					1	8	9	5	16	11	5	3	4	62				0 61	5·31	0·20	8	23	0	5	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING AUGUST, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days ·01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni										
Annis	1·16	9	22	0·34	15					
Beavor Lake	0·38	3	28	0·27	14					
Coquitlam	1·38	6	25	0·14	22					
Denman's Island	1·20	3	28	0·60	13					
Ferguson	1·30	4	27	0·17	14					
Goldstream Lake	0·73	4	24	0·40	28					
Grand Forks	0·64	7	24	0·21	15-30					
Hornby Island	1·13	5	26	0·58	28					
Jordan River	0·58	6	25	0·17	22					
LittleQualicum(French Creek, V.I.)	0·86	4	27	0·39	31					
Monte Creek	1·71	4	27	0·90	13					
Naas Harbour	3·60	13	18	1·30	21					
Sooke	0·20	1	30	0·20	15					
Skidgate	1·28	6	25	0·50	31					
ALBERTA—										
Bardo	2·43	6	25	0·70	22	*	1	*	31	
Bismark	3·25	10	21	1·03	11	*	1	*	23	
Bruederheim	1·61	14	17	0·49	27					Aurora on 29.
Bittorn Lake	4·55	15	16	1·40	5	*	1	*	23	Thunder on 5.
Bantry										
Brooks	1·86	10	21	0·48	22					Thunder on 12, 13.
Conjuring Creek	3·93	6	25	0·95	21					
Coutts	R.	1	27	R	7-28					
Campsie	3·07	13	18	0·69	27					Aurora on 18. Thunder on 13, 26, 27. Fog on 7, 8, 9, 10, 11.
Doronlee	2·62	11	20	0·50	30					
Elkwater	1·76	9	22	0·44	13	*	1	*	24	Thunder on 13.
Grassy Lake	0·50	3	28	0·40	5					
Jumping Pound	3·78	13	18	1·10	5	*	1	*	23	Thunder on 10, 11, 12, 13, 28.
Kimball										
Lacombo	2·75	9	22	0·68	28	*	1	*	23	
Langdon	2·63	11	20	0·50	30					
Loch Sloy	2·78	14	17	0·97	14	0·8	1	0·8	24	Thunder on 5, 14, 29.
Macleod	1·18	7	24	0·32	5	*	1	*	23	
Mayton										
Okotoks	3·39	14	17	0·71	31	*	1	*	23	Thunder on 1, 11, 12, 28.
Ponoka	4·64	4	27	3·02	16	2·0	1	2·0	22	
Sion	3·33	13	18	1·12	28					Aurora on 2, 5, 7, 31. Thunder on 6, 7, 9, 11, 12, 13, 14, 26, 27, 28.
Wabamun										
SASKATCHEWAN—										
Elm How										
Hanley	1·48	5	26	0·55	8					
Last Mountain										
Maple Creek	1·70	8	23	0·45	6					Thunder on 6.
Kindersley	1·19	11	20	0·49	2					Thunder 1, 2, 11, 21.
MANITOBA—										
Cartwright	1·43	13	18	0·74	29					Aurora on 9 and 30.
Deloraine										
Grotna	2·06	6	25	0·93	15					Thunder on 15, 19, 29.
Norquay	1·93	8	23	1·17	30	*	5	*	1-30	
Rapid City	0·83	4	27	0·48	29					Aurora on 1, 3. Thunder on 1, 12, 15.
ONTARIO—										
	3·61	10	21	1·08	4					Thunder on 4, 6, 19, 24, 26.
Arden	2·96	9	22	1·01	4					Thunder on 1, 4, 10, 31.
Deer Park	0·75	2	29	0·50	26					
Dutton	4·25	15	16	1·28	26					Thunder on 4, 9, 15, 16, 22, 23, 25.
Emsdale										
Ennismore										
Goderich	2·64	10	21	0·77	31					Thunder on 1, 3, 4, 9, 15, 16, 18, 22, 25, 30.
Georgetown	2·61	8	23	1·04	10					
Grantham	3·32	9	22	1·22	16					
Grand Valley	8·76	16	15	2·54	17					
MacCue	2·31	5	26	0·80	18					
Orangeville	3·19	9	22	0·69	10					
Princeton	2·58	6	25	1·23	3					Thunder on 3, 10, 29 30.
Sydenham	3·43	5	26	0·93	18					
Strathroy	3·13	8	23	0·99	17					Thunder on 22.
Watford	2·89	6	25	1·02	31					
Westport	2·56	4	27	1·15	18					Thunder on 4, 5, 14.
Wooler	4·00	9	22	1·63	17					Thunder on 23, 25.
Westminster	1·88	5	26	0·75	18					Thunder on 1, 22.
Wiarton	6·21	9	22	1·82	25					Thunder on 1, 3, 9, 17, 24, 25.
Wesley	1·25	10	21	1·49	10					Thunder on 3, 9.
QUEBEC—										
Timiskaming	8·76	16	15	2·54	17					
NEW BRUNSWICK—										
Point Escuminac	3·62	7	21	1·22	11					Fog on 17.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF AUGUST, 1910.

STATIONS.	Hours Ending																	
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria			·05	·38	·51	·61	·66	·74	·74	·79	·83	·83	·78	·72	·59	·07	..	
Nanaimo			·03	·15	·52	·53	·61	·63	·69	·79	·83	·80	·79	·75	·71	·20	....	
Vancouver			·12	·31	·41	·40	·41	·49	·55	·59	·66	·72	·78	·78	·69	·28	..	
Agassiz				·15	·25	·31	·39	·45	·49	·59	·55	·51	·57	·51	·27	·02	....	..
Tranquille			·14	·56	·59	·59	·62	·67	·61	·70	·72	·72	·72	·63	·51	·25	..	..
Summerland			·39	·57	·59	·68	·65	·67	·66	·62	·60	·57	·55	·56	·51	·02	....	
Kamloops			·12	·43	·60	·65	·62	·63	·68	·65	·75	·82	·74	·67	·46	·10	·02	
Edmonton			·25	·45	·48	·50	·59	·63	·63	·65	·68	·61	·56	·50	·37	·26	..	
Lethbridge		·11	·54	·61	·68	·75	·71	·71	·76	·70	·61	·57	·43	·37	·13	.	.	
Lacombe			·15	·51	·55	·66	·68	·73	·70	·74	·71	·71	·58	·55	·48	·26	·04	
Medicine Hat		·13	·34	·43	·45	·51	·65	·68	·66	·66	·62	·61	·58	·39	·18	.	.	
Fort Vermilion			..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	
Battleford		..	..	·09	·21	·33	·37	·39	·41	·40	·37	·42	·42	·43	·31	·11	..	
Indian Head			·13	·40	·53	·62	·65	·69	·71	·64	·53	·53	·56	·64	·46	·12	.	
Moosejaw		·02	·34	·52	·59	·67	·72	·69	·70	·69	·67	·63	·61	·61	·53	·38	·02	.....
Dunvegan																		
Brandon			·18	·49	·63	·72	·76	·71	·75	·70	·67	·60	·52	·44	·09	·01	.....	....
Winnipeg			·15	·39	·51	·66	·65	·70	·72	·67	·71	·75	·69	·66	·60	·33	.....	....
Haileybury			·21	·33	·41	·49	·52	·50	·55	·49	·52	·49	·49	·45	·45	·23	T	.....
Woodstock			·04	·29	·55	·62	·61	·66	·63	·57	·68	·65	·67	·48	·29	·02	..	.....
Lindsay				·05	·20	·31	·37	·41	·41	·37	·37	·42	·26	·29	·18	·03	....	..
Barrie			·03	·29	·46	·47	·46	·46	·49	·51	·54	·54	·49	·39	·28	T	..	.
Toronto				·11	·51	·58	·68	·65	·66	·64	·59	·61	·57	·55	·39	·17	T	
Kingston			·19	·49	·57	·67	·77	·74	·74	·75	·71	·68	·65	·55	·45	·24	..	
Ottawa			·13	·47	·60	·65	·72	·67	·69	·67	·66	·68	·62	·55	·43	·11	....	.
Montreal			·09	·42	·57	·62	·64	·59	·66	·65	·63	·63	·56	·05	....	.	..	..
Quebec		....	·09	·40	·52	·51	·60	·55	·62	·66	·62	·56	·52	·51	·34	·04	.....	..
Sherbrooke																		
Fredericton		·02	·15	·31	·44	·46	·61	·70	·65	·70	·78	·76	·65	·62	·51	·27	T	..
Charlottetown		·02	·32	·49	·56	·59	·63	·60	·63	·70	·74	·70	·70	·69	·66	·25	..	..
Truro																		

	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw	Dunvegan.	Brandon.	Winnipeg.	Haileybury.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.	Truro.
Registered duration in hours	259	258	221	158	251	238	215	223	211	219	216		131	224	261	.	227	254	190	210	111	169	209	254	238	189	204	..	238	257	..
Percentage of possible duration	59	59	51	36	57	54	56	51	55	36	49	..	30	50	59	.	51	58	43	19	26	39	48	59	55	50	47	..	54	59	..
Difference from average	+2	+7	—	—6	—	—	—	—	—	—	—	—	—	+1	—	—	—3	+1	—	—6	—28	—23	—10	+3	+2	—7	—	—	+4	—	..
Maximum percentage in one day	89	86	95	84	93	90	91	94	91	95	89	.	82	90	97	.	88	94	97	86	85	84	88	96	93	90	87	..	96	96	..
Date of maximum	21	19	21	24	21	24	21	17	8	17	25		18	9	25	..	9	17	29	20	13	19	24	20	19	27	29	..	21	21	..
No. of days completely clouded	1	0	1	8	2	4	2	8	2	0	7		3	2	1	..	0	4	3	1	5	4	1	1	1	3	3	..	2	1	..

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Schreiber, IV ; Chicoutimi, Gaspe, St. Albans, II ; Haileybury, IV ; Gravenhurst, IV.

2. Sion, Waitefield, IV ; Minnedosa, II.

3. Rapid City, Gaspe, St. Albans, III ; Halkirk, Waitefield, III ; Foxleigh, Winnipeg, II ; Muenster, II ; Chaplin, IV.

4. Crescent Lake, IV ; Gravenhurst, IV.

5. Sion, Kakabeka Falls, IV.

7. Sion, Gilt Edge, IV ; Oliver, II.

8. Crescent Lake, IV.

9. Cartwright, II ; Kakabeka Falls, II ; Kenora, III ; Gaspe, Hillview, I ; St. Albans, I ; Treherne, IV ; Gilt Edge, III ; Halkirk, Waitefield, IV ; Three Hills Creek, I ; Foxleigh, Aitkensville, III ; Quebec, IV ; Charlottetown, IV ; Winnipeg, II ; Muenster, I ; Saskatoon, Chaplin, IV ; Crescent Lake, IV ; Oliver, I.

10. Kakabeka Falls, IV ; Haliburton, II ; Madoc, III ; Pincher Creek, Port Arthur, I ; Minnedosa, I ; Esterhazy, III ; Oliver, I ; Haileybury, IV.

11. Waitefield, IV ; Aitkensville, IV ; Quebec, IV.

12. Hillview, IV ; Aitkensville, IV ; Quebec, IV.

14. Gaspe, Aitkensville, IV.

15. Chicoutimi, Gaspe.

17. Schreiber, IV ; St. Albans, IV ; Aitkensville, IV ; Esterhazy, III ; Oliver, I.

18. Kakabeka Falls, IV ; Haliburton, IV ; Bruce Mines, I ; Schreiber, IV ; Chicoutimi, St. Albans, IV ; Gilt Edge, III ; Hillsdown, IV ; Halkirk, Waitefield, I ; Three Hills Creek, IV ; Foxleigh, Aitkensville, III ; Estevan, II ; Campsie, II ; Oliver, I ; Haileybury, IV.

19. Brandon, Gilt Edge, II ; Three Hills Creek, III ; Winnipeg, III ; Oliver, IV ; Haileybury, III.

20. Waitefield, III ; Esterhazy, II.

21. Agincourt, IV ; Chicoutimi, Waitefield, III ; Three Hills Creek, III ; Kingston, III ; Montreal, III ; Quebec, IV ; Cochrane, IV ; Oliver, I.

23. Quebec, IV.

24. Three Hills Creek, IV.

25. Oliver, I.

26. Aitkensville, IV.

27. Aitkensville, III.

28. Stony Creek, III ; Kakabeka Falls, II ; Kenora, II ; Lake Talon, Port Dover, Madoc, III ; Schreiber, III ; Abitibi, Gaspe, Aitkensville, II ; Parry Sound, IV ; Esterhazy, I ; Cochrane, IV ; Haileybury, III ; Gravenhurst, IV.

29. Bruderheim, Kenora, IV ; Gilt Edge, III ; Waitefield, II ; Quebec, IV ; Haileybury, IV.

30. Cartwright, IV ; Kenora, III ; Schreiber, IV ; St. Albans, II ; Gilt Edge, IV ; Aitkensville, IV ; Esterhazy, III ; Crescent Lake, III ; Oliver, I.

31. Sion, III ; Lake Talon, IV ; Lucknow, IV ; Schreiber, IV ; Halkirk, Pakan, IV ; Waitefield, II ; Aitkensville, III ; Muenster, IV ; Melfort, Oliver, I ; Haileybury, III.

Thunder recorded :

1. Okotoks, Rapid City, Westminster, Wiarton, Georgetown, Deer Park, Peterboro', Paris, Lake Talon, Elora, Bloomfield, Otonabee, Lucknow, Clinton, Port Dover, Birnam, Madoc, Pt. Clark, Lake Edward, Almasippi, Treherne, Hillsdown, Halkirk, Three Hills Creek, Aitkensville, Shawinigan Falls, Ursa, Toronto, Port Arthur, Port Stanley, Kingston, Lloydminster, Cannington Manor, Esterhazy.

2. Brome, Almasippi, Treherne, Harmattan, Aitkensville, Fredericton, Ottawa, Montreal, Quebec, Winnipeg, Crescent Lake, Chaplin, Saskatoon, Rathmullen.

3. Wesley, Princeton, Wiarton, Georgetown, Agincourt, Aurora, Collingwood, Kakabeka Falls, Lake Talon, East Toronto, Bloomfield, Meaford, Otonabee, Lucknow, Haliburton, Clinton, Port Dover, Birnam, Brantford, Bruce Mines, Madoc, Pt. Clark, Schreiber, Midland, Harmattan, Ursa, Fredericton, Toronto, Port Arthur, Southampton, Quebec.

4. Westport, Arden, Georgetown, Emsdale, Deer Park, Peterboro', Lake Talon, East Toronto, Haliburton, Uplands, Madoc, Pt. Lepreaux, Brome, Chicoutimi, Lake Edward, Shawinigan Falls, Port Burwell, Toronto Parry Sound, Port Stanley, Kingston, Ottawa, Montreal, Quebec, Grand Manan, Bermuda, Cochrane, London.

5. Bittern Lake, Loch Sloy, Westport, Peterboro', Haliburton, Brome, Waitefield, Montreal, Yarmouth, Maple Creek, Chaplin, Saskatoon.

6. Sion, Arden, Pt. Clark, Hillview, Three Hills Creek, Aitkensville, Minnedosa, Maple Creek, Crescent Lake, Cannington Manor, Chaplin, Esterhazy.

7. Sion, Kenora, Hillview, Harmattan, Chaplin.

8. Kakabeka Falls, Kenora, Oakbank.

9. Sion, Wesley, Wiarton, Georgetown, Emsdale, Agincourt, Beatrice, Meaford, Otonabee, Lucknow, Haliburton, Clinton, Port Dover, Uplands, Birnam, Brantford, Bruce Mines, Schreiber, Midland, Hamilton, Toronto, Parry Sound, Port Arthur, Southampton, Bermuda, Gravenhurst.

10. Bismark, Jumping Pound, Princeton, Deer Park, Kakabeka Falls, Peterboro', Paris, East Toronto, North Gower, Birnam, Brantford, Pt Clark, St. Albans, Harmattan, Hillsdown, Halkirk, Pincher Creek, Three Hills Creek, Ursa, Toronto, Port Stanley, Ottawa, Montreal, London.

11. Sion, Okotoks, Jumping Pound, Kenora, Brome, Treherne, Morden, Harmattan, Hillsdown, Halkirk, Lacombe, Three Hills Creek, Aitkensville, Montreal, Minnedosa, Chaplin, Rathmullen.

12. Sion, Okotoks, Jumping Pound, Brooks, Rapid City, Schreiber, Treherne, Harmattan, Hillsdown, Halkirk, Pincher Creek, Red Deer, Three Hills Creek, Charlottetown, Minnedosa.

13. Sion, Jumping Pound, Brooks, Elkwater, Schreiber, Lake Edward, Hillsdown, Red Deer, Wetaskiwin Maple Creek, Campsie, Haileybury.

14. Sion, Loch Sloy, Westport, Lucknow, Birnam, Pt. Clark, Moncton, Chicoutimi, Harmattan, Hillsdown, Halkirk, Red Deer, Waitefield, Three Hills Creek, Father Point, Charlottetown, Lloydminster, Chaplin, Saskatoon, Muenster, Rathmullen.

15. Rapid City, Gretna, Georgetown, Emsdale, Peterboro', Kenora, Lake Talon, East Toronto, Uplands, Brantford, Oakbank, Almasippi, Treherne, Ottawa, Montreal, Minnedosa, Winnipeg, Crescent Lake, Cannington, Manor, Esterhazy, Gravenhurst.

16. Georgetown, Emsdale, Ronville, Bloomfield, Meaford, Otonabee, Uplands, Madoc, Aitkensville, Ursa.

17. Wiarton, Beatrice, Peterboro', Lake Talon, Otonabee, Lucknow, Brantford, Madoc, Midland, Kingston, Bermuda, Gravenhurst.

18. Georgetown, Peterboro', Elora, East Toronto, Otonabee, Haliburton, Owen Sound, Uplands, Birnam, Pt. Clark, St. Albans, Almasippi, Toronto, Southampton, Port Stanley, Kingston, London.

19. Gretna, Arden, Treherne, Morden, Winnipeg.

20. Kakabeka Falls, Schreiber, Midland, Bermuda, Guelph

21. Colingwood, Lake Talon, Bruce Mines, Copper Cliff, Schreiber, Wetaskiwin, Lloydminster, Rathmullen.

22. Westminster, Georgetown, Strathroy, Emsdale, Agincourt, Beatrice, Kakabeka Falls, Lake Talon, Elora, East Toronto, Meaford, Lucknow, Owen Sound, Clinton, Uplands, Birnam, Brantford, Bruce Mines, Copper Cliff, Lake Edward, Three Hills Creek, Toronto, Parry Sound, Southampton, Saskatoon, Cochrane, Gravenhurst, Haileybury.

23. Emsdale, Sunnyside (Wooler), Lake Talon, Otonabee, Madoc, Chicoutimi, Lake Edward, Clarke City, Parry Sound, Ottawa, Montreal, Quebec.

24. Arden, Wiarton, Beatrice, Lake Talon, Ronville, Otonabee, Lucknow, Owen Sound, Bruce Mines, Madoc, Midland, Ursa, Kingston, Ottawa, Gravenhurst, Haileybury.

25. Wiarton, Georgetown, Emsdale, Wooler, Beatrice, Peterboro', Lake Talon, Elora, East Toronto, Bloomfield, Meaford, Otonabee, Lucknow, Haliburton, Clinton, Port Dover, Uplands, Birnam, Bruce Mines, Madoc, Copper Cliff, Pt. Clark, Lake Edward, Shawinigan Falls, Toronto, Parry Sound, Southampton, Port Stanley, Kingston, Montreal, Quebec, Gravenhurst, Haileybury.

26. Sion, Arden, Port Stanley, Kingston, Campsie.

27. Sion, Brome Campsie.

28. Sion, Okotoks, Jumping Pound, Hillsdown, Halkirk, Red Deer, Chaplin.

29. Loch Sloy, Gretna, Princeton, Pt. Clark, Hillview, Oakbank, St. Albans, Almasippi, Treherne, Morden, Gleichen, Foxleigh, Aitkensville, Minnedosa, Winnipeg, Crescent Lake, Cannington Manor.

30. Princeton, Georgetown, Kakabeka Falls, Kenora, Port Arthur.

31. Deer Park, Agincourt, East Toronto, Otonabee, Lucknow, Haliburton, Birnam, Brantford, Toronto, Kingston, Montreal, Bermuda, Estevan, London.

FORECASTS FOR AUGTST, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1381. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per-centage.
Alberta	84	64	17	3	86·3
Saskatchewan	81	66	15	3	87·6
Manitoba	85	69	10	6	87·1
Lake Superior	126	97	19	10	84·5
Lower Lake Region	135	106	25	4	87·8
Georgian Bay	135	101	29	5	85·5
Ottawa Valley	123	97	22	4	87·8
Upper St. Lawrence	123	99	20	4	88·6
Lower St. Lawrence	120	95	25	0	89·6
Gulf	124	95	27	2	87·5
Maritime Provinces West	121	91	24	6	85·1
Maritime Provinces East	121	92	24	5	85.9
Total	1381	1072	257	52	86·9

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
August, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

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Monthly Weather Review.

VOL. XXXIV. SEPTEMBER, 1910. No. 9.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

The mean temperature of September was above the normal by 1° or less over the southern portion of British Columbia, but in the north country was from 2° to 3° below. Temperatures as high as 90° were recorded within the first 20 days, but after the 23rd there was a change to cooler conditions and the lowest temperatures of the month were recorded during the last week. With the exception of Nicola Lake, all districts reported a rainfall considerably less than the normal. Practically all the rain fell during the first and last weeks. Fresh snow fell upon the mountains several times during the month. A heavy fruit crop was expected in the Okanagan and Kootenay valleys, except in the non-irrigated districts.

In Alberta the mean temperature of the month was normal in the north and west, but was about 1° below the normal in the southern districts. The warmest period of the month was from the 14th to the 20th, when temperatures of 80° or higher were registered. About the 22nd there was a change to much cooler weather, the lowest temperature of the month occurring at most stations on the 25th. The rainfall of the month appeared to be less than the normal in the mountain region only. Snow flurries were recorded several times during the month at the Crow's Nest Pass and other high levels in western Alberta.

The mean temperature ranged from normal to about 2° below in Saskatchewan, but over the greater part of the province was 1° below. The maximum temperatures recorded during the warm period from the 16th to 21st ranged from 80° to 85°, but the last week of the month was cold with very heavy frost, minimum temperatures below 20° occurring north of the 52nd parallel. The amount of precipitation was less than the normal, the deficiency amounting to an inch or more. Between the 6th and 16th there were frequent showers, which interfered with the threshing of the grain in several districts. Flurries of snow were recorded locally on the 7th, 11th and 24th. Threshing was nearly completed at the end of the month.

In western Manitoba the mean temperature of the month was below the normal, but in eastern Manitoba the mean was above the normal by about 0·5°. The precipitation was in excess of normal over the greater part of the province, the excess ranging from one-half to more than one inch. Temperatures between 85° and 90° were recorded in the western portion of the province from the 16th to 20th, while 80° was not reached in the extreme eastern portion. A very heavy frost occurred on the 26th, when vegetables not under shelter were frozen.

Locally in the Lake Superior districts, in the lower Georgian Bay counties and in the vicinity of Lake St. Clair the normal mean temperature was exceeded by 1° or less, but over the province of Ontario generally the mean temperature of September was from 1° to 4° below the normal, the greater departures from normal occurring in eastern Ontario. Light frosts occurred several times during the month, but no serious damage was done to crops till late in the month, and then to vegetables only in the northern counties. The amount of precipitation was slightly in excess on the shore of Lake Erie and locally in the counties of Bruce, South Grey, Wellington, Halton, Peel, South York and in the Lake Superior districts. Over the province generally, however, the precipitation was deficient. A thunderstorm occurred in nearly all districts of the peninsula on the 6th, when an inch, or more of rain fell.

In Quebec both the mean temperature and the precipitation were less than normal. The normal mean was not reached by from 1° to 2°, while the deficiency of rainfall was more than an inch in the counties to the north of the Ottawa River. At the majority of the stations a temperature of 70° was not exceeded during the month. There were not, however, any heavy frosts. The crops were good and saved in excellent condition.

While the mean temperature of September reached the normal in some localities in southern New Brunswick, southern Nova Scotia and Cape Breton Island, generally in the Maritime Provinces the month was about 2° cooler than the normal. The precipitation was in excess in eastern Nova Scotia, but was deficient elsewhere. The month was on the whole unusually fine. Grain crops were reported above the average in quality, as well as corn and tomatoes. The root crops were not in so good condition.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for September was above the average throughout Canada; the greatest departures were +·21 at Dawson and +·14 at Edmonton.

LOW AREAS.

During the month of September fifteen distinct cyclonic systems were observed on the North American continent. Of these one passed to the eastward of Bermuda, and did not directly affect the weather of the Canadian coast. Seven systems originated or first passed into the field of observation in the northwestern portion of the continent north of the 50th parallel, while another originated in a bi-focal system which on the 28th lay across the boundaries of Alberta, Saskatchewan and Montana. This last was the only one of the areas to exhibit any marked energy, and during the greater part of its course north of the great lakes and over the Gulf of the St. Lawrence appeared to be under the influence of a system which, originating in the far northwest, was passing too far to the northward for any data regarding its path to be as yet available. One minor disturbance apparently developed near the coast below the 40th parallel and passed rapidly out to sea without any apparent northerly movement. Of the remainder of the systems all but two were first charted in the western plateaus of the United States and their movements were erratic and ill-defined until they had passed beyond the mountainous region. Two disturbances, originating in this territory, were dissipated before the advance of another centre with convergent path, and consequently are not counted as separate systems. The remaining two excepted above travelled northward from the West Indies, one of them combining in the Gulf of the St. Lawrence with a northwestern low, while the other was immediately followed by a subsidiary centre which developed off the southern Nova Scotian coast. Neither were of marked energy. With the exception of the West Indian storms and the disturbance which developed on the Atlantic seaboard, all the systems travelled across the Great Lakes and the St. Lawrence, while twelve of the whole fifteen areas passed out to sea over Newfoundland or the Labrador coast.

HIGH AREAS.

Seven areas of high pressure were observed during the month of September. Six of the parent systems entered the continent north of the 45th parallel and one on the United States Pacific seaboard. Two of the systems while centred in the far north were of marked energy but decreased rapidly in pressure during their course. The last anticyclonic area of the month, which entered the continent about latitude 45°, although of little importance at first, gained in energy upon reaching the great lakes and passed to sea with increasing pressure. The remaining systems were of moderate importance throughout their paths. The point of egress of all seven areas was in New England or the Maritime Provinces

WINDS.

In British Columbia on Vancouver Island and over the mainland the diriction was variable with few fresh or strong breezes, light to moderate winds usually prevailing.

In Alberta the north and west directions were most in evidence, with seven days with strong and five with fresh breezes.

In Saskatchewan the direction favoured slightly the north and west, with three days with strong and seven with fresh breezes.

In Manitoba the direction was variable, with nine days with strong and ten with fresh breezes.

In the Lake Region the direction was variable, with five days with strong and thirteen with fresh breezes, and one moderate gale occurring on the 24th.

In the Ottawa and Upper St. Lawrence Valleys the direction was variable, with three days with strong and eleven with fresh breezes.

In the Lower St. Lawrence Valley and the Gulf the direction was variable, with seven days with strong and eleven with fresh breezes, and two moderate gales which were experienced on the 25th and on the 28th.

In the Maritime Provinces the north and west directions were slightly in the ascendency with five days with strong and eleven with fresh breezes.

The moderate gales of the 24th and 25th were warned but that of the 28th was not warned.

TEMPERATURE.

Over the greater part of the Dominion the mean temperature of September was less than the average of the same month for the preceding twenty years. In the southern portion of British Columbia, the western portion of Alberta, in eastern Manitoba, locally in the Lake Superior districts, the lower Georgian Bay and Lake St. Clair counties of Ontario, and locally also in southern New Brunswick, southern Nova Scotia and Cape Breton Island, the normal mean temperature was either equalled or slightly exceeded. Over the remainder of the Dominion the temperature ranged from 1° to 4° below the normal, the greatest departures occurring in eastern Ontario.

The highest and lowest temperatures recorded in each Province during the month of August, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	93° at Alberni on the 19th.	15° at Wilmer on the 9th and 12th.
Alberta,	84° at Blairmore on the 19th.	14° at Eckville on the 24th.
Saskatchewan,	90° at Estevan on the 16th.	13° at Meota on the 23rd.
Manitoba,	92° at Aweme on the 16th	20° at Pierson on the 26th.
Ontario,	87° at Cottam on the 5th.	21° at Coldwater on the 22nd.
Quebec,	82° at Shawbridge on the 4th.	25° at Lake Edward on the 19th.
New Brunswick,	77 at Chatham on the 12th.	30° at Moncton on the 29th.
Nova Scotia,	82° at Port Hastings on the 5th.	32° at Windsor on the 25th.
P. E. Island,	72° at Charlottetown on the 13th.	40° at Charlottetown on the 30th.

PRECIPITATION.

Less than the normal precipitation was recorded in British Columbia, the mountain districts of Alberta, Saskatchewan, the greater portion of Ontario, Quebec and the greater portion of the Maritime Provinces. There was an excess in Alberta, locally in Ontario and in eastern Nova Scotia, while snow-flurries occurred several times during the month at the high levels in British Columbia and Alberta.

BRIGHT SUNSHINE.

Throughout Ontario except in the Ottawa Valley and in Quebec the amount of bright sunshine registered during the month of September was less than normal. Elsewhere in Canada there was a slight excess.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA. SEPTEMBER, 1910

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'n	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from	PRECIPITATION Amount.	Difference from average.	Greatest in 24 hours.	Days with 0.01 in. or more.	No. of days.	No. of days.	No. of days.	No. of days.
BRITISH COLUMBIA				in.	in.	in.	in.																																	
Alberni (Beaver Creek)	49 15	124 49	300					57 3	0 6	15	93 0		19	30 0	12	33 8																								
Agassiz	49 14	121 31	52					58 6	+ 1 1	20	84 0		12	40 0	25	32 4																								
Atlin	59 35	133 38	2240					16 2		5	66 5		11	27 0	23	16 6																							
Barkerville	53 2	121 35	4180	30 07	30 11	29 63	0 72	43 1	- 2 8	22	68 0		20	24 0	11	18 8		91	5	4	0	0	0	4	1	10	0	1	1	6	69	1 7	12 0	5							
Bella Coola	52 40	126 51	150					55 5	+ 1 6	12	86 0		14	35 0	12-16	24 1																	1 9	....								
Babine Lake	55 38	126 26						48 8		2	73 7		15	27 5	8	23 1																							
Chilcotin (Big Creek)	51 40	123 0	3100					47 5		7	76 0		20	23 0	21	27 0																							
Cranbrook	49 30	115 50						53 6	-	2	82 0		16	22 0	25	30 8																							
Chayoquot	49 11	125 47	40					56 1	+ 0 8	11	80 0		19	40 0	12	19 3																							
Cowichan (Tzouhalem)	48 25	123 42	170					57 0		9	81 0		19	35 0	25	21 8																							
Chilliwack	49 10	121 57	21					58 0		9	90 0		19	31 0	25	20 9																							
Enderby	50 32	119 7	1180					55 0		2	84 0		21	22 0	24	30 7																							
Fairview	49 11	119 36						60 3		1	88 0		19	38 0	25	27 8																							
Fruitvale	49 9	117 31						53 6		1	85 0		20	25 5	25	32 0																							
Glacier	51 14	117 29	1072					45 5		8	65 0	17	18	29 0	25	18 3																							
Golden	51 16	116 55	2530					50 1		9	80 0		20	24 0	25	28 4																							
Holberg	50 39	128 18						54 6		2	75 1		11	38 7	12	14 4																							
Hedley	49 35	120 10						56 3		5	86 0	19	29	31 0	21	26 1																							
Hedley (Nickel Plate)								43 2		7	73 0		20	23 0	27	21 0																							
Hope	49 23	121 25						57 5		1	89 0		20	35 0	25	24 6																							
Ikeda Bay	52 17	131 7	5					55 0		3	73 0		20	40 0	21	15 9																							
Kamloops	50 41	120 20	1215	29 98	30 28	29 61	0 66	58 2	+ 0 2	18	86 0		20	29 2	25	25 0		71	5	3	0	3	3	1	1	3	21	2	23	69	3 8	13 0	7W	0 43	- 0 33	0	6	21			
Ladner	49 5	123 4						56 6		8	76 0		20	41 0	27	18 0																							
Massett, Q.C.I	53 58	132 9	30					56 0	- 2 5	13	70 0		21	41 0	23	11 7																							
aNanaimo	49 10	123 57	125	29 96	30 20	29 70	0 50	57 1	+ 1 0	10	80 7		19	37 6	25	17 8		89	4	3	0	1	0	3	0	2	2	21	29	69	7 1	12 0	38 W	1 25	- 0 82	0	10	9	21	0	1
Nicola Lake	50 9	120 33	2120					52 1	- 0 3	15	77 0		22	21 0	25	21 2																							
North Nicomen	49 12	122 2	50					50 8	+ 2 1	18	88 0		19	37 0	25	18 2																							
New Westminster	49 13	122 51	330	30 05	30 29	29 76	0 53	58 1	+ 1 1	23	80 2		19	39 1	25	19 2		82	6	5	0	1	15	3	5	10	1	3	22	69	3 8	20 0	3W	2 51	1 57	1	5	9	21	0	2
Nelson	49 29	117 21	1710					57 9		8	79 0	18	19	38 0	29	26 0																							
Needles								51 4		1	79 0	19	20	33 0	25	27 3																							
Okanagan Mission (Kelowna)	49 52	119 29	1200					55 0	- 0 4	11	78 0		2	29 0	25	22 2																							
Princeton	49 28	120 29	1650					53 9	+ 0 5	16	85 0		20	23 0	25	30 0																							
Penticton	49 29	119 35						56 8		4	79 0		21	31 0	25	25 0																							
Pemberton Hatchery	50 20	122 33						55 8		3	87 0		19	32 0	25	25 0																							
Prince Rupert	54 18	130 18	170	30 05	30 10	29 36	1 01	50 8		3	73 0		12	38 5	13	14 1		83	8	17	1	11	11	0	17	9	1	1	9	69	5 7	20 0	28 N	8 49	1 34	14	16	6	0	8
Quesnelle	52 58	122 30	1700					49 9	- 2 0	15	80 0		21	22 0	23	29 7																							
Revelstoke	51 0	118 6	1476					54 9	+ 2 1	11	82 0	19	21	30 0	25	27 4																							
Rossland	49 5	117 18	3100					51 5		7	77 6		20	33 0	25	19 7																							
Ruskin (Stave Falls)	49 16	122 23	125					50 9		1	82 0		19	43 0	25	22 9																							
Stuart's Lake (Fort St. James)	54 28	124 12	2280					46 8	+ 2 4	17	80 0		15	17 5	24	21 8																							
Salmon Arm	50 42	119 35	1245					56 1		5	83 0		21	28 0	25	26 2																							
Steveston (Garry Point)	49 21	123 17						51 4	0 6	15	72 5		21	33 5	25	17 5																							
Swanson Bay	50 37	126 53						51 8		2	73 0		11	30 0	21	13 7																							
Salt Spring Island	48 50	123 20						56 2		1	79 0		19	41 0	25	17 2																							
Summerland	49 57	119 0	1100					57 2		4	81 0		19	32 0	25	20 8																							
Tobacco Plains (Elko)	49 1	115 5	2684					55 6	- 1 1	13	87 1		17	25 0	25	33 1																							
Triangle Island	50 52	129 5	680	30 12	30 37	29 70	0 67	48 5		1	55 0	9	13	43 0	11	16 27	6	95	8	18	3	7	0	13	0	4	3	30	0	69	16 0	35 0	3 S W	5 12	1 52	18	12	0	0	19
aTranquille	50 41	120 29		28 81	28 11	28 55	0 56	57 8		3	86 0		20	29 0	25	25 8		58	4	1	7	3	2	2	0	6	16	13	10	69				0 10	0 05	2	28	0	0	3
Vernon (Coldstream Ranch)	50 14	119 15	1575					56 8	+ 2 1	17	84 0		20	32 0	25	25 3																							
Victoria	48 24	123 19	85	30 01	30 27	29 79	0 48	56 6	+ 0 4	18	77 4		19	41 2	25	16 7		71	5	2	5	4	2	1	9	17	3	3	13	69	6 3	21 0	1 SW	1 39	0 10	0	61	6	24	0	3
Vancouver	49 17	123 5	136	30 06	30 31	29 77	0 51	57 5	+ 1 9	10	75 3		13	40 8	25	16 1		77	5	4	2	5	8	11	1	7	9	7	16	69	3 5	12 0	3 S W	2 47	1 93	1	52	9	21	0	4
Winter Harbour	50 32	128 3						54 2	+ 0 6	14	78 0		11	36 0	12	16 4																							
Wilmer	50 34	116 11						51 6		2	85 0		20	15 0	9 12	35 8																							

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, SEPTEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Pressure. Highest.	Pressure. Lowest.	Pressure. Range.	Temperature. Mean.	Temperature. Difference from average.	Temperature. Years observed.	Temperature. Highest.	Temperature. Date.	Temperature. Lowest.	Temperature. Date.	Temperature. Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Days on which fell	Days with .01 or more	Days with .10 or more	Days with .25 or more
SASKATCHEWAN *Con.*				in.	in.	in.	in.																														
Strassburg	51	5	104	56				49 6			84	18	21	26	26																						
Scott (Hearts Hill	51	30	109	30				49 5			84	3	15	25	26																						
Wascana	50	6	109	29				47 7			85	8	0	15	16	0	35	26	0																		
Yorkton	51	11	102	29							84	1	0	12	22	0	26			1	1	0	2	1	7	14	3	0	30				1	20		7	1	0	0
MANITOBA																																						
Almasippi	49	11	99	20				53 2			88	1	0	29	23	0	26	24	5														2	11		1	29	9	21	0	0	0
Aweme (St. Albans)	49	12	99	33	1180	28 81	29	22	28	42	0	80	53 4	1	0	26	91	5	16	22	0	0	26	25	4											2	06		0	0	0	0	0	0
Brandon	49	51	99	57	1176								52 4	1	0	5	22	90	0	16	25	0	0	16	26	7	5	3	4	16	0	8	1	14	3	13	0	90	1	11	NNW	1	93	+ 0	12	0	0	0
Borens River	52	18	97	23	710								49 6				170	0	16	16	0	0	23	17														2	12		0	0	0	0	0	0
Carberry	49	52	99	26	1258								53 9				6	81	0	16	24	0	0	26	25	6												2	57		0	0	0	0	0	0
Carman	49	31	98	0	872								54 1				7	80	0	16	28	0	0	26	24	2												1	03		0	0	0	0	0	0
Cypress River	49	33	99	3	1232								52 4				15	81	0	17	25	0	0	26	23	8												2	36		0	0	0	0	0	0
Hillview	49	55	100	23	1100								52 1		0	1	28	91	0	16	22	0	0	26	23	6	1	5	11	14	3	1	1	20	12	21	1	90				1	77	+ 0	77	1	1	0
Minnedosa	50	15	99	50	1690	30 01	30	18	29	57	0	91	51 2		0	9	27	86	5	16	22	0	0	26	24	2	5	1	4	5	1	0	1	1	3	6	30	67				1	08	0	04	0	0	0
Morden	49	11	98	6	978								54 6				5	83	0	29	30	0	0	26	22	5												2	21		1	26	8	21	0	0	0
Moose Horn Bay (Atkensville)	51	15	99	33									50 1				1	74	5	17	27	4	0	26	21	3												2	88		0	0	2	0	0	0
Oakbank	49	57	96	12	740								51 9		0	7	15	75	7	20	28	0	0	26	20	5			13	12	2	5	9	15	9	4	4	60				2	78	0	47	1	1	0
Pipestone	49	31	100	58	1100								49 9				8	80	0	17	24	0	0	26	26	2			8	1	1	0	4	4	1	8	0	30				1	11		0	0	0	0
Portage la Prairie	49	57	98	17	830								53 2		1	3	20	80	0	16	28	0	0	25	19	5												2	02		0	4	1	27	0	0	0
Portage la Prairie (2)	49	56	98	17									52 6				5	8	0	17	29	0	0	26	20	0																				
Pierson	49	11	101	5	1531								50 3				5	90	0	16	29	0	0	26	31	3												1	72		0	0	2	0	0	0
Stony Mountain	50	10	97	11	803								52 4		0	3	28	78	0	16	23	0	0	26	26	1			13	6	6	3	12	1	6	10	0	60	11	19	16	3	34	1	12	1	0	0
Swan River	52	6	101	15	1112								49 9				3	80	0	15	19	26	0	0	25	23	1												2	79		0	0	2	0	0	0
Treherne	49	39	98	40	1212								53 5		0	4	15	81	0	28	25	0	0	26	21	3												2	03		0	1	3	0	0	0
Virden	49	51	100	55	1141								51 5				5	90	0	16	25	0	0	25	27	6												1	96		0	0	0	0	0	0
Winnipeg	49	53	97	7	760	30 02	30	13	29	63	0	80	54 3		0	4	37	78	0	15	25	8	0	26	21	8	5	2	8	6	3	11	7	7	6	8	1	62				2	71	0	83	1	0	0
ONTARIO																																						
Alton	43	51	80	5	1250								53 9		3	8	21	80	2	10	27	4	0	22	20	9	3	3	12	2	11	0	23	3	33	3	0	90	1	10	NNW	2	41	0	38	1	0	0
Aurora	43	57	79	21	886								56 1				3	78	9	6	29	7	0	22	22	2												0	68		1	87	0	18	3	0	1	0
Agincourt	43	47	79	16	300								58 7		2	9	11	81	0	6	35	0	0	22	21	1			7	2	21	5	14	5	13	19	1	90				3	07	1	86	6	24	1	1	0
Barrie	44	23	79	41	889								46 3		3	1	35	76	3	8	33	2	0	22	18	7	5	1	13	4	11	10	12	5	2	11	19	90	11	11	21 E	1	18	0	02	1	21	10	29	0	0	0
Beatrice	45	8	79	29	800								53 3		1	6	35	75	0	8	24	0	0	22	23	5	5	7	6	1	1	8	11	3	2	6	52	90	1	11	21 S E	2	01	1	17	1	5	2	2	0
Bruce Mines	46	18	83	50	595								51 7		2	0	11	75	0	1	16	31	0	22	22	5													2	32		0	24	0	37	11	19	0	0	0
Birnam	43	29	81	49	690								50 3		1	3	25	78	2	6	33	0	0	22	16	8			11	7	16	5	7	2	3	1	5	60				2	62	0	37	1	20	7	3	1	3	2
Brantford	43	10	80	21	750								58 0		2	5	28	82	0	12	33	0	0	23	23	9												1	57		0	54	0	85	10	29	0	0	0
Bloomfield	43	59	77	21	260								58 3		2	2	10	75	0	7	13	36	0	22	20	0												1	84		0	81	1	24	3	0	0	0	0
Bancroft	45	1	77	50									52 6		1	5	19	76	0	8	17	25	0	21	26	2												1	54		2	26	0	94	2	2	0	0	0
Copper Cliff	46	30	80	59									54 3				1	76	0	8	32	0	0	22	20	1												0	58		0	53	10	30	0	0	0	0	0
Clinton	43	32	81	37									57 2				8	78	0	9	35	0	0	23	19	5			10	0	12	5	11	3	9	10	0	60				1	63	0	21	1	2	2	0	0
Coldwater	44	38	79	40	600								52 7		1	9	23	81	0	8	24	21	0	22	22	5												2	82	+	0	13	0	73	0	0	0	0	0
Cottam	42	7	82	45	606								61 2		0	8	23	87	0	5	31	0	0	22	23	5			11	0	9	13	18	3	3	0	0	60				2	57	+	0	26	0	70	1	0	0	0	0
Chatham	42	23	82	12	595								62 9	+	0	8	24	86	0	5	39	0	0	22	21	6												2	85	+	1	30	1	90	5	25	0	0	0
Cochrane	49	2	81	0	930																																										
Collingwood	44	31	80	2													16																														
East Toronto	43	35	79	18									50 1				4	79	0	7	19	0	0	19	20	8												1	80		1	41	2	49	4	26	0	0	0
Elora	43	41	80	24	1271								57 5		1	1	13	80	0	7	30	0	0	22	25	5												1	33		1	30	5	25	1	2	2	0	0
Gravenhurst	44	54	79	20	770								53 1		1	5	39	77	0	8	29	0	0	22	21	7	4	1	11	2	15	4	13	7	10	7	18	90	11	19	24 E	2	62	+	0	25	1	17	3	2	0	0	0
Guelph	43	33	80	16	1050								58 3		0	8	25	78	0	5	31	0	0	22	23	0												3	30		1	12	1	19	3	2	0	1	0
Grimsby	43	13	79	36	282								62 3				1	83	0	7	13	41	0	10	22	1												2	78		0	91	12	18	0	0	0	0	0
Haileybury	47	29	79	39	687	30 07	30	11	29	65	0	79	53 1		2	1	15	75	8	8	28	0	0	22	18	6			8	1	1	3	18	8	7	12	7	60	11	19	17 S W	2	57	1	13	0	18	17	13	3	3	2
Hamilton	43	16	79	51	303								59 8		2	1	36	79	0	3	6	42	0	10	16	5												2	71		0	47	0	79	6	21	0	0	0
Haliburton	45	1	78	28	1050								53 6		2	9	23	78	0	8	25	0	0	22	27	0												2	10		0	83	1	01	3	2	0	1	0
Kellora	49	48	91	32	1102								19 2		3	8	10	69	0	2	5	29	0	12	17	7												1	28			1	0	1	0	0	0	0	0

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, SEPTEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observed	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more	No. of fair days.	No. of aurorae.	No. of thunder storms.	No. of fogs.
NEW BRUNSWICK—																																								
Bathurst	47 39	65 42	15					55 0	2 0	36	76 5		12		33 0	25	20 3			5	3	4	4	11	0	0	17	11	9	1	60				1 05	1 47	0 06	3	21	0	0	0
Chatham	47 3	65 29	21	30 10	30 11	29 61	0 83	52 1	3 4	36	73 0				35 0	18	25	18 9				0	1	30	4	5	0	16	0	2	30				1 30	0 38	1 05	3	25	0	0	0
Dalhousie	48 4	66 12	39																																							
Fredericton	45 57	66 39	161	30 11	30 13	29 67	0 76	54 5	1 7	37	75 0				32 5	30	21	6		86	6	4	12	9	4	6	11	21	20	3	90	6 3	12 0	28 w	2 56	0 85	1 46	3	23	0	4	3
Grand Manan	44 47	66 46	19	30 10	30 38	29 70	0 68	50 9	0 7	26	70 6		18		45 0	11	23	12 7			6	6	5	12	5	3	3	9	7	9	7	60				1 23	0 07	0 31	1	0	0	0	7
Moncton	46 9	64 45	50					53 7	2 1	13	75 0		13		30 0		29	22 5				0	0	4	0	0	1	12	2	0	23				2 50	0 49	0 75	7	13	0	0	1
*Point Lepreaux	45 4	66 28	30					51 2	1 9	32	62 0	1	12		41 0		23				4	5	12	18	10	2	1	19	2	0	71	68				1 98	1 06	0 32	9	21	0	0	8
St. John	45 17	66 4	70	30 10	30 38	29 72	0 66	50 6	0 0	37	73 0		18		44 5		10	12 2			5	5	13	10	3	0	8	7	1	5	13	60	11	18	19 E	1 62	0 38	11	19	0	0	4
St. Stephen	45 11	67 16	35					54 4	1 8	13	75 0		4		33 0		30	24 0																2 31	0 82	0 94	8	21	0	0	4
Sussex	45 38	65 38	69					54 6	0 7	13	73 0		5		31 0		30	20 2				0	7	0	0	0	1	2	6	10	29				2 31	0 52	0 75	7	23	0	0	0
NOVA SCOTIA—																																									
Halifax	44 39	63 36	88	30 08	30 38	29 66	0 72	58 6	0 2	36	77 4		5		36 0		30	17 7				6	13	10	1	5	6	13	4	1	60				3 33	0 08	1 01	12	18	0	0	1
Port Hastings	45 39	61 32	15					58 1			18 82	0	5		40 0	3	17	20 2				4	1	1	8	1	7	0	8	0	30				3 02	1 65	1 50	6	24	0	0	0
Parrsboro'	45 23	64 19	10					51 2	1 5	11	70 0		6		35 0		11	17 5																3 03		1 03	8	22	0	0	0
Sydney	46 10	60 10	35	30 10	30 10	29 71	0 69	58 0	0 4	1 0	37 75	0	5		35 0		3	15 3			8	15	5	8	6	1	2	11	6	7	8	60				1 10	0 83	1 20	13	17	0	3	0
*Sable Island, E. Point	43 58	60 16	25					62 1	1 8	26	71 0		14		51 0		23						3	10	0	0		5	0	20	0	39				3 24	0 45	1 30	6	21	0	1	11
Truro	45 22	63 18						56 4	0 5	37	78 2		13		29 3		30	22 1			6	5	1	16	2	1	9	9	10	5	23	78				2 63	0 23	0 71	13	17	0	0	3
Windsor	44 59	64 6	90					56 6		8	78 0		14		32 0		25	20 6																2 85		0 95	11	20	0	0	0
*Whitehead	45 15	61 8	20					59 6	+ 2 3	27	68 0		13		48 0		29						11	4	19	11	9	32	3	0	0	10				3 34	0 63	1 05	6	21	0	0	1
aWolfville	45 7	64 24		29 60	30 28	29 61	0 67	57 0	0 6	11	72 0	13	18		37 0		30	16 8					3	5	8	0	1	5	17	3	18	60				4 47	1 51	1 61	11	19	0	0	2
Yarmouth	43 50	66 2	65	30 10	30 36	29 73	0 63	56 3	+ 0 1	30	73 0		6		37 0		30	16 3					12	8	6	3	9	6	3	7	6	60				3 82	+ 0 0	0 87	12	18	1	1	4
P. E. ISLAND																																									
Charlottetown	46 14	63 10	38	30 08	30 38	29 65	0 73	55 2	0 5	35	70 0	10	11		40 0		30	14 9				5	13	8	2	3	15	2	7	5	60				2 49	1 35	0 85	13	17	1	0	0
Charlottetown (2)	46 13	63 10	75					57 5		1	72 0		13		40 0		30	16 2																2 83		0 98	11	19	0	0	0
NEWFOUNDLAND—																																									
*Amour Point	51 28	56 51						47 8	+ 1 9	18	69 0		18		30 0		30						12	3	24	1	3	0	19	5	3	80				0 57	2 03	0 42	2	28	0	0	3
Burin	47 6	55 10	27	30 10	30 15	29 62	0 83	54 8		2	67 0		21		37 0		30	11 4				11	2	0	1	24	5	6	10	1	60				5 20		1 10	12	18	0	1	0
*Cape Norman	51 38	55 52						48 1	0 1	28	60 0		9		35 0		31					8	32	1	2	1	20	10	26	0	80				7 25	+ 0 15	1 31	15	15	0	0	3
Fogo	49 43	54 17	30	30 08	30 50	29 61	0 89	53 7		1	67 0	5	6		40 0	19	29	13 1				7	8	2	1	4	4	9	7	1	60				3 33		0 80	15	15	1	1	1
*Point Rich	50 42	57 25	35					51 3	+ 2 0	26	69 0		13		39 0		19					5	11	4	12	9	31	4	1	80				3 73	0 06	1 00	7	23	0	0	2
Port aux Basques	47 35	59 10	27	30 09	30 39	29 58	0 81	53 8		2	64 5		1		35 0		30	10 8				5	5	18	0	6	4	10	11	1	60				5 41		1 49	14	16	0	0	5
St. John's	47 34	52 42	125	30 05	30 42	29 48	0 91	53 8	+ 0 1	38	72 0		21		37 0	3	20	13 7			6	6	2	0	0	1	21	9	11	7	6	60				1 35	0 90	1 78	18	12	0	0	5
BERMUDA—																																									
Prospect	32 17	64 30	151	30 08	30 27	29 65	0 62	78 5	+ 0 1	20	88 0		12		69 0		21	11 1					8	5	4	4	12	6	10	6	5	60				6 18	1 21	1 96	16	11	0	4	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING SEPTEMBER, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alkali Lake	0·07	3	27	0·01	28					Thunder on 6.
Annis	0·91	9	21	0·23	6					
Beaver Lake	1·32	6	24	0·10	28					
Coquitlam	2·58	6	24	1·76	29					
Denman's Island	1·82	4	26	0·76	29					
Ferguson	2·10	9	21	0·51	29					
Goldstream Lake	2·14	11	19	0·75	29					
Grand Forks	0·82	7	23	0·20	28					
Hornby Island	...	...	...	...	...	...	...	...	...	
Jordan River	2·95	8	22	1·26	29					
Little Qualicum (French Creek, V.I.)	1·35	5	25	0·50	28					
Monte Creek	0·28	3	27	0·21	3					
Naas Harbour	8·11	16	11	1·29	18					Thunder and lightning on 29th.
Sooke	1·60	4	26	0·90	30					
Skidgate	...	...	...	...	...	...	...	...	...	
ALBERTA—										
Bardo	2·03	4	26	0·78	3		2		11 23	Thunder on 3.
Bismark	3·35	6	21	0·91	5					
Bruederheim	1·63	8	22	0·80	4					½" ice on 25.
Bittern Lake	1·93	12	18	0·73	1					
Bantry	...	...	...	...	...	...	...	...	...	
Brooks	1·57	10	20	0·37	23	2·2	2	1·7	24	
Conjuring Creek	4·31	5	25	2·13	31					
Coutts	0·02	1	29	0·02	1					
Campsie	2·17	10	20	0·39	5					Aurora on 10, 24. Fog on 8, 28, 29.
Dorenlee	0·92	5	25	0·80	4					
Elkwater	1·02	4	26	0·11	7	7·0	2	4·0	25	
Grassy Lake	1·05	3	27	0·45	18					
Jumping Pound	1·42	8	22	0·80	7					
Lacombe	1·20	5	25	0·82	4					
Langdon	1·10	3	27	0·85	6	1·0	1	1·0	24	
Loch Sloy	2·24	11	19	0·54	6	0·3	1	0·3	24	Thunder on 1. Aurora on 30.
Macleod	2·50	7	23	0·56	6	6·0	3	2·0	6-23-24	
Mayton	...	...	...	...	...	...	...	...	...	
Okotoks	3·34	7	23	1·15	6	0·3	2	0·3	24	Thunder on 3, 10, 23.
Ponoka	2·87	6	24	1·90	4					
Sion	1·95	11	19	0·40	3		2		6·7	
Wabamun	...	...	...	...	...	...	...	...	...	
SASKATCHEWAN—										
Elm How	...	...	...	...	...	...	...	...	...	
Hanley	1·56	3	27	0·99	6					
Kindersley	1·37	6	24	0·75	6					Thunder on 5.
Last Mountain	...	...	...	...	...	...	...	...	...	
Maple Creek	1·26	9	21	0·51	5					Hard frost on 9.
MANITOBA—										
Cartwright	1·11	3	27	0·86	5					Aurora on 27. Thunder on 1, 1, 29.
Deloraine	...	...	...	...	...	...	...	...	...	
Gretna	3·86	3	27	3·05	5					
Norquay	1·17	5	25	0·45	5		3		1 5 29	
Rapid City	1·71	5	25	1·09	5					Thunder on 5, 16.
ONTARIO—										
Arden	3·37	9	21	1·97	6					
Deer Park	3·63	3	27	2·03	6					Thunder on 3.
Dutton	1·35	4	26	0·50	26					Thunder on 8, 26.
Emsdale	3·46	9	21	1·65	6					Aurora on 7, 28, 29. Thunder on 8, 30.
Goderich	...	...	...	...	...	...	...	...	...	
Georgetown	2·98	8	22	0·86	5					Thunder on 3, 5, 6, 30. Fog on 5, 30.
Grantham	1·69	13	17	0·85	3 5					
Grand Valley	1·84	9	21	0·62	5					
MacCue	1·48	2	28	0·87	6					
Orangeville	2·10	4	26	1·08	28					
Princeton	2·82	5	25	1·00	27					Thunder on 8, 27, 30.
Sydenham	3·15	4	26	1·30	6					
Strathroy	1·83	5	25	0·62	4					Thunder on 8.
Watford	1·61	4	26	0·48	5					
Westport	3·24	6	24	0·83	7					
Wooler	1·50	6	24	0·52	5					
Westminster	1·78	4	26	0·65	27					Thunder on 8, 30.
Wiarton	2·41	10	20	1·65	3					Thunder on 6, 8, 30.
Wesley	3·13	11	19	1·31	6					Thunder on 30.
QUEBEC—										
Timiskaming	2·47	11	19	0·63	21					
NEW BRUNSWICK—										
Point Escuminac	1·61	7	23	0·71	14					Fog on 15, 20.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF SEPTEMBER 1910.

STATIONS	Hours Ending																		
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria							·09	·20	·39	·50	·63	·67	·71	·73	·71	·68	·45	·12			
Nanaimo							·08	·33	·51	·61	·67	·69	·71	·66	·72	·73	·58	·16			
Vancouver							·08	·25	·46	·51	·52	·60	·66	·71	·67	·69	·61	·25	·02		
Agassiz						·02	·18	·40	·49	·55	·51	·56	·61	·60	·48	·38	·11				
Tranquille							·06	·42	·61	·62	·69	·68	·69	·64	·67	·65	·55	·28	·01		
Summerland						·01	·37	·55	·61	·66	·56	·60	·66	·63	·63	·53	·56	·16			
Kamloops						·05	·19	·53	·62	·57	·63	·68	·67	·65	·72	·67	·55	·12	·01		
Edmonton						·01	·13	·50	·57	·57	·63	·63	·63	·61	·57	·58	·53	·25	·03		
Lethbridge						·03	·33	·46	·52	·60	·59	·67	·66	·62	·62	·61	·51	·31	·01		
Lacombe						·01	·18	·41	·60	·61	·59	·57	·66	·61	·63	·59	·55	·11	·10		
Medicine Hat						·13	·42	·51	·59	·57	·57	·55	·58	·62	·61	·50	·16	·01			
Fort Vermilion																					
Battleford						·06	·29	·35	·51	·59	·58	·64	·62	·61	·58	·51	·48	·10			
Indian Head						·01	·07	·35	·58	·63	·61	·65	·63	·66	·61	·59	·49	·13	·02		
Moosejaw							·01	·48	·66	·71	·69	·69	·68	·70	·71	·69	·47	·18	·01		
Dunvegan							·05	·31	·46	·46	·55	·63	·59	·55	·48	·47	·38	·19			
Brandon						·01	·31	·55	·41	·68	·65	·73	·75	·67	·59	·45	·15				
Winnipeg							·05	·10	·49	·57	·66	·63	·65	·63	·57	·56	·48	·22	·01		
Haileybury						·02	·23	·41	·44	·49	·59	·60	·58	·59	·59	·52	·49	·38	·03		
Woodstock								·28	·46	·58	·58	·64	·68	·64	·69	·72	·55	·11			
Lindsay							·01	·11	·40	·47	·52	·60	·58	·58	·59	·34	·22	·13	·03		
Barrie							·18	·40	·47	·54	·57	·57	·65	·62	·67	·65	·55	·21			
Toronto							·04	·17	·62	·61	·65	·64	·74	·76	·72	·75	·68	·25			
Kingston						·01	·13	·47	·55	·54	·56	·59	·56	·56	·58	·59	·49	·15	·02		
Ottawa						·01	·23	·46	·60	·62	·62	·62	·63	·61	·62	·68	·63	·41			
Montreal						T	·15	·46	·41	·50	·49	·55	·63	·64	·61	·52	·03				
Quebec							·19	·50	·56	·57	·62	·57	·61	·66	·66	·63	·58	·05			
Sherbrooke							·12	·41	·56	·58	·57	·61	·61	·54	·57	·53	·43	·15			
Fredericton						·01	·13	·29	·47	·58	·58	·62	·58	·63	·59	·7	·36	·17	·02		
Charlottetown							·14	·62	·67	·65	·68	·73	·71	·64	·69	·55	·46	·20	·02		
Truro																					

	Victoria.	Nanaimo.	Vancouver.	Agassiz.	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw	Dunvegan.	Brandon.	Winnipeg.	Haileybury.	Gravenhurst	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa.	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.
Registered duration in hours.	182	192	181	149	190	191	190	188	198	191	176		176	178	200	157	198	178	178		178	137	182	208	171	202	151	186	171	165	200
Percentage of possible duration	48	51	48	39	53	51	53	50	52	51	47		47	47	53	42	52	47	47		47	36	48	55	46	54	40	49	45	44	53
Difference from average	3		—	+ 8								—	+ 2	+ 8	—	—	6	+ 1	—		— 2	— 16	0	— 1	— 5	+ 11	— 7	—	—		+ 7	..
Maximum percentage in one day	87	81	92	82	88	90	93	89	97	98	90		84	88	84	90	83	87	93		96	86	88	86	94		89	88	88	97	91	..
Date of maximum	19	1	12	2	12	12	12	19	2	19	2		15	2	2	13	17	11	16		29	30	11	2	2		*10	30	11	10	15	..
No. of days completely clouded.	1	3	2	7	1	1	1	4	3	3	5		2	5	1	7	3	5	4		1	7	4	3	6	3	4	3	3	5	5	..

*Also on 11th and 28th.

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Waitefield, III ; Three Hills Creek, III ; Hillsdown, IV ; Red Deer, II ; Birnam, III ; Muenster, II ; Waseca, Aitkensville, IV ; Oliver, Spirit River

2. Red Deer, III ; Aitkensville, IV ; Muenster, IV ; Magdaleine, Esterhazy, III ; Crescent Lake, IV.

3. Fort Vermilion.

4. Fort Vermilion.

6. Waitefield, IV ; Kakabeka Falls, I ; Lake Talon, Madoc, IV ; Gravenhurst, IV; Fort Vermilion, Stuarts Lake.

7. Emsdale, III ; Madoc, IV ; Montague, Gravenhurst, IV.

8. Muenster, I ; Esterhazy, III ; Oliver.

9. Waitefiled, III ; Aitkensville, IV ; Esterhazy, III ; Crescent Lake, IV.

10. Waitefield, IV ; Pakan, III ; Aitkensville, IV ; Lake Talon, Lucknow, IV ; Montague, Melfort, Haileybury, III ; Campsie, IV ; Peace River Crossing, IV ; Gravenhurst, IV ; Esterhazy, III ; Quebec, IV ; Oliver, Stuarts Lake.

12. Waitefield, III ; Three Hills Creek, IV ; Hillsdown, IV ; Kakabeka Falls, IV.

13. Waitefield, III ; Three Hills Creek, IV ; Red Deer, IV ; Aitkensville, IV ; Kakabeka Falls, IV ; Muenster, III ; Crescent Lake, IV ; Oliver.

14. Kakabeka Falls, Fort Vermilion.

15. Treherne, III ; Kakabeka Falls, Estevan, III ; Dawson, II ; Oliver, Fort Vermilion.

16. Pakan, IV ; Red Deer, IV ; Kakabeka Falls, Esterhazy, IV ; Quebec, IV.

17. Red Deer, IV.

18. Pakan, III.

20. Waitefield, III ; Halkirk, Hillsdown, IV ; Aitkensville, IV ; Brownhill, III ; Muenster, I ; Maple Creek, II ; Estevan, IV ; Melfort, Esterhazy, III ; Foxleigh, Dawson, IV.

21. Minnedosa, I.

22. Dawson, IV.

24. Waitefield, II ; Three Hills Creek, III ; Pakan, III ; Hillsdown, IV ; Gilt Edge, II ; Red Deer, IV ; Meota, IV ; Campsie, III ; Peace River Crossing, IV ; Cape Magdaleine, ; Father Point, II ; Grand Manan, IV ; Yarmouth, I ; Charlottetown, IV ; Okanagan Mission, Lunnford.

25. Aitkensville, IV ; Maple Creek, III ; Esterhazy, II.

26. Waitefield, III ; Pakan, III ; Montague, Port Dover, Chaplin, II ; Esterhazy, III ; Foxlegh, Stuarts Lake, Crescent Lake, IV ; Dawson, IV ; Oliver.

27. Cartwright, IV ; Aitkensville, IV ; Aweme, II ; Kakabeka Falls, II ; Port Dover, Brownhill, III ; Meota, IV ; Melfort, IV ; Esterhazy, IV ; Foxleigh, Winnipeg, II ; Fogo, Nfld., IV ; Dawson, I ; Kenora, III ; Crescent Lake, III ; Schreiber, Fort Vermilion, II.

28. Emsdale, IV ; Agincourt, III ; Clinton, Kakabeka Falls, IV ; Lake Talon, IV ; North Bruce, IV ; Pt. Clark, Muenster, IV ; Maple Creek, II ; Melfort, IV ; Parry Sound, IV ; Quebec, IV ; Schreiber, IV ; Eort Vermilion.

29. Emsdale, IV ; Gilt Edge, IV ; Aitkensville, IV ; Aweme, III ; Kakabeka Falls, III ; Haileybury, IV ; Peace River Crossing, IV ; Esterhazy, IV, Oliver.

30. Loch Sloy, Waitefield, I ; Haileybury, IV ; Foxleigh, Oliver, Fort Vermilion, IV.

Thunder recorded :

1. Cartwright, Paris.

2. Dawson, Barrie.

3. Bardo, Okotoks, Deer Park, Georgetown, Waitfield, Three Hills Creek, Pakan, Halkirk, Agincourt, East Toronto, Brantford, Birnam, Peterboro', Midland, Lucknow, Hamilton, London, Port Stanley, Toronto, Salmon Arm, Princeton, Hope, Westport, Paris, Barrie.

4. Loche Sloy, Cartwright, Treherne, Almasippi, Oakbank, Morden, Otonabee, North Bruce, Cannington Manor, Esteven, Winnipeg, Okanagan Mission, Kenora.

5. Rapid City, Georgetown, Oakbank, East Toronto, Clinton, Birnam, Pt. Clark, North Bruce, Lucknow, Kindersley, Salmon Arm, Alberni, Kenora, Pemberton Hatchery.

6. Georgetown, Agincourt, North Bruce, Madoc, Lake Talon, Haliburton, Kingston, Southampton, Toronto, Annis, Okanagan Mission, Nicola Lake, Wiarton.

7. Otonabee, Kakabeka Falls, Gravenhurst.

8. Dutton, Emsdale, Princeton, Strathroy, Westminster, Clinton, Brantford, Birman, Bruce

Mines, Uplands, Midland, Lucknow, Kakabeka Falls, Haileybury, Gravenhurst, Okanagan Mission, Wiarton.

9. London, Port Stanley, Montreal, Quebec.
10. Okotoks, Fogo Nfld
11. Bruce Mines.
12. Agincourt, East Toronto, Pt. Clark, Gravenhurst, Kingston, Barrie.
13. Kingston.
14. Hope.
16. Rapid City, Treherne, Almasippi, Carberry, Aitkensville, Hillview, Kenora.
17. Oakbank, Bruce Mines, Pt. Clark, Lake Talon, Yarmouth, Minnedosa, Winnipeg.
18. Sydney.
20. Brome, Montreal.
21. Burin, Nfld., Nelson, Glacier.
22. Nelson.
23. Okotoks, Pt. Clark, Foxleigh, Tobacco Plains.
24. Pt. Clark, Berens River.
25. East Toronto, Bella Coola.
26. Dutton, Athabasca Landing, Fredericton.
27. Princeton, Agincourt, Brantford, Bruce Mines, Lake Talon, Hamilton, London, Haileybury, Port Stanley, Toronto, Lindsay, Paris.
29. Cartwright, Waitefield, Treherne, Almasippi, Morden, Hillview, Kakabeka Falls, Lloydminster, Foxleigh, Naas Harbour, Bella Coola, Schreiber, Kenora.
30. Emsdale, Georgetown, Princeton, Westminster, Wesley, Beatrice, Bloomfield, Brantford, Aurora, Uplands, Port Dover, North Bruce, Midland, Kakabeka Falls, Stony Creek, Haileybury, Gravenhurst, Parry Sound, Port Arthur, Toronto, Wiarton, Berens River, Schreiber, Kenora, Barrie.

FORECASTS FOR SEPTEMBER, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1318. These were divided as follows:

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per centage
Alberta	77	64	8	5	88·3
Saskatchewan	77	59	15	3	86·4
Manitoba	77	60	14	3	87·0
Lake Superior	120	92	21	7	85·4
Lower Lake Region	132	106	20	6	87·9
Georgian Bay	132	104	24	4	87·9
Ottawa Valley	117	97	17	3	90·1
Upper St. Lawrence	117	97	17	3	90·1
Lower St. Lawrence	119	93	15	11	81·4
Gulf	116	84	27	5	81·0
Maritime Provinces West	117	81	27	9	80·8
Maritime Provinces East	117	89	19	9	84·2
Total	1318	1026	224	68	86·3

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
November, 1910.

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DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. OCTOBER, 1910. No. 10.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

On Vancouver Island and the southwestern mainland of the province of British Columbia, October was a rainy month. Many districts reported rainfall of double the normal quantity for October. Over the same portion of the province the mean temperature was either normal or lower by about 1°. While along the the coast, rain fell on from eighteen to twenty-four days, in the interior precipitation was comparatively infrequent, but in all cases equalled or exceeded the normal quantity. In the southern interior the mean temperature was slightly higher than normal, but in the northern districts was between 2° and 3° lower. The warmest days were the 6th, 7th, 8th, 15th, 16th and 17th, and on these temperatures of 60° or higher were recorded in the southern portion of the province, while 70° was exceeded at a few points in the extreme south.

The mean temperature was higher than the normal throughout Alberta and Saskatchewan, and this was apparently due, for the most part, to two exceptionally warm periods during the month, namely, from the 6th to the 9th, and from the 14th to the 17th. On these days temperatures between 75° and 80° were recorded in Alberta and between 80° and 90° in Saskatchewan. The lowest temperatures occurred during the last three days, the minima ranging from 5° to 15°. The greatest difference from normal occurred in southwestern Alberta and central-southern Saskatchewan, amounting to nearly 5° in the former and nearly 4° in the latter district. Except in the Banff district of Alberta, the amount of precipitation recorded was much less than the normal quantity in both provinces. The month on the whole was exceptionally favourable to the progress of farm labour of all kinds.

The greater part of the month of October was warm and sunny in Manitoba. The mean temperature was about 4° above normal in the western and about 5° above in the eastern portion of the province. From the 7th to the 9th and from the 14th to the 18th, maximal temperatures reached a summer-like intensity when 85° was exceeded at some points. On the 20th, 22nd, 26th, 28th and 31st minimal temperatures of about 16° were registered, but on other days little or no frost was recorded. The precipitation, which consisted principally of rain, occurred on an average throughout the province on four days only, and was very light.

In Ontario the mean temperature was higher than the average of the last twenty-five years, except in some portions of the Ottawa valley. For the most part the difference from normal did not exceed 3°. The warmest days occurred between the 3rd and 5th and the 15th and 20th, maximal temperatures ranging from 75° to 85° during these periods. Very little frost occurred till the last few days of the month. Precipitation was in excess of the normal, except on the western side of Lake Superior and a few districts in eastern Ontario. Thunderstorms were recorded on the 1st, 18th, 21st and 27th. Snowflurries occurred on the last days of the month.

In western Quebec the mean temperature was about 1° above the normal, in Quebec city 0·5° above, at Father Point 1° above, but further east, on the island of Anticosti, on the north shore of the Gulf, and also in the Abitibi region, was 1° below. Except in the Abitibi region the precipitation was in excess. Flurries of snow occurred on the 14th and the last three days of the month in the north and northeast.

In the Maritime Provinces the mean temperature did not differ greatly from the normal, but was generally less than 1° above, although in a few districts it was slightly below. Cloudy or rainy weather prevailed during the greater part of the month, and the amount of precipitation was in excess in Nova Scotia and Prince Edward Island, while in New Brunswick, although rain fell on from 10 to 12 days, the total amount was considerably less than the normal.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for October was less than average throughout Canada except in western districts of British Columbia, where the normal was slightly exceeded. Negative departures were generally about 0·05 of an inch, and the extreme 0·15 of an inch was reached at Sydney, N.S. The value of the mean pressure ranged from 30·015 inches at New Westminster, B.C., to 29·750 inches at Atlin, B.C., and the extreme positive departure from the normal was 0·015 of an inch at New Westminster, B.C.

HIGH AREAS.

The courses of nine areas of high barometric pressure were charted during October, only three of which passed north of the Great Lake Region. The systems usually lost energy as they progressed south-eastward, and few were of marked intensity.

Six areas developed, or were first observed, south of the 50th parallel of North Latitude and passed south-eastward to the Atlantic. One passed from the Yukon, south-eastward over Ontario to the Middle Atlantic, one from the same district southward to Texas and thence eastward, and one apparently from Keewatin to the Maritime Provinces.

LOW AREAS.

Fifteen distinct cyclonic systems affected the weather on the American Continent during October, and six of these were augmented by subsidiary developments.

Nine areas moved into the field of observation over Northern British Columbia and the Yukon Territory, and travelled southeastward to New Ontario, and thence eastward to Labrador. One area, apparently of tropical origin, curved northeastward from Cuba, and then passed eastward north of Bermuda.

Subsidiary developments in the Lake Region and off the Middle Atlantic coast were usually accompanied by strong gales.

WINDS.

In British Columbia on Vancouver Island and over the Mainland the direction was largely variable, favouring somewhat the south and west, with sixteen days with fresh but with few strong breezes.

In Alberta the north and west directions predominated, but the winds seldom exceeded a moderate breeze.

In Saskatchewan the winds were chiefly between the northeast and southwest, with three days with strong and sixteen with fresh breezes and three gales.

In Manitoba the direction was variable with fourteen days with strong and eight with fresh breezes and three gales.

In the Lake Region the direction was variable, with eight days with strong and twelve with fresh breezes and four gales the latter occurring on the 1st, the 22nd, the 27th, and the 30th.

In the Ottawa and Upper St. Lawrence Valleys the northwest, west and southwest directions usually prevailed with five days with strong and sixteen with fresh breezes and two gales.

In the Lower St. Lawrence Valley and the Gulf the direction was for the most part between the northwest, west and southwest with eight days with strong and ten with fresh breezes and six gales, the gales occurring on the 2nd, the 4th, between the 11th, and 12th, on the 16th, the 24th and on the 28th.

In the Maritime Provinces the north and west directions were chiefly in evidence, with thirteen days with strong and eight with fresh breezes and five gales, the latter occurring on the 2nd, between the 10th, and 12th, on the 24th, the 26th, and on the 28th.

The storms of the month from the Lake Region to the Maritime Provinces were with few exceptions very moderate and often more or less local. A warning was issued on each occasion a storm was experienced, but a warning forwarded to River St. Lawrence and Bay of Chaleur stations on the 6th was not subsequently justified by dangerous winds.

The heaviest gale of the month in the St. Lawrence Valley and the Gulf occurred on the 2nd.

TEMPERATURE

The mean temperature of the month of October was above the normal, in the southern interior of British Columbia, in Alberta, Saskatchewan, and Manitoba by from 3° to 5°, over the greater part of Ontario by 3° or less, in western Quebec and along the St. Lawrence as far as Father Point by 1° or less, and in the Maritime Provinces, with local exceptions, by less than 1°. A mean temperature less than normal was reported from Vancouver Island and the northern mainland of British Columbia, portions of the Ottawa Valley, Northern Quebec, and the Gulf of the St. Lawrence.

The highest and lowest temperatures recorded in each Province during the month of August, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	75° at Fairview on the 13th	9° at Quesnelle on the 26th.
Alberta,	81° at Medicine Hat on the 8th.	3° at Blairmore on the 20th.
Saskatchewan,	91 at Pense on the 9th.	6° at Esterhazy on the 28th.
Manitoba,	89° at Awemc on the 9th.	8° at Brandon on the 28th.
Ontario,	85° at Maitland on the 16th.	12° at Clinton on the 29th.
Quebec,	80° at Sherbrooke on the 7th.	15° at Clarke City on the 21st.
New Brunswick,	78° at Fredericton on the 6th.	20° at St. Stephen on the 31st.
Nova Scotia,	78° at Wolfville on the 6th.	21° at Truro on the 14th.
P. E. Island,	71° at Charlottetown on the 9th.	29° at Charlottetown on the 14th.

PRECIPITATION.

The precipitation was very heavy on Vancouver Island and the lower mainland of British Columbia, in several districts amounting to double the normal quantity. In all other portions of the province the normal amount was either equalled or exceeded. In Alberta, Saskatchewan and Manitoba very little precipitation occurred, and in all cases was less than the normal, with the exception of the Banff district of Alberta. In Quebec, the greater portion of Ontario, in Nova Scotia and Prince Edward Island the normal quantity was exceeded, but in New Brunswick, although rainfalls were frequent, the amount was deficient.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month of October was considerably less than normal in British Columbia, almost normal in Alberta, in excess in Saskatchewan, Manitoba and Ontario, and deficient in Quebec and the Maritime Provinces.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, OCTOBER, 1910.

a Barometer not reduced to Sea Level * Stations not furnished with Registering Thermometers

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Pressure. Highest.	Pressure. Lowest.	Pressure. Range.	Temperature. Mean.	Temperature. Difference from average.	Temperature. Years observed.	Temperature. Highest.	Temperature. Date.	Temperature. Lowest.	Temperature. Date.	Temperature. Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Velocity of wind. Highest day's velocity.	Velocity of wind. Date and direction from.	Precipitation. Amount.	Precipitation. Difference from average.	Heaviest fall in month.	Days with 0.01	No. of days	No. of days	No. of days	No. of days.
BRITISH COLUMBIA	°	°	ft.	in.	in.	in.	in.	°	°		°		°		°	°	%																								
Alberni (Beaver Creek)	49	15	124	49	300						48 4	–	2 8	15	89	0	10	21	0	12	20	2																			
Agassiz	49	14	121	31	52						49 9	+	1 1	20	69	0	19	31	0	26	20	0																			
Atlin	59	35	133	38	2240	29	75	30	46	29	24	1	12	30	2		1	49	0		12		17	0		29	10	5													
Barkerville	53	2	121	35	4180	29	95	30	61	29	25	1	36	31	1	+	2 3	22	51	0		15		12	0		26	11	8			6	7		0		0	3		1	8	0		0	50	62		2 3		10	0		12	–							
Bella Coola	52	40	126	54	150						44 1	–	1 2	11	62	0	13	26	0	11	26	11	1																		
Babine Lake	55	38	126	26							37 5			2	57	7	20	17	0		26	10	6																		
Chilcotin (Big Creek)	51	10	123	0	3100						37 6			7	68	0	11	13	0		26	24	8																		
Cranbrook	49	30	115	30										2	68	5	10	12	0		24																			
Clayoquot	49	11	125	17	10						50 2		0 0	11	03	0	12	30	0		26	14	3																		
Cowichan (Tzouhalem)	48	26	123	42	170						50 9			1	05	2	6	29	0		27	14																			
Chilliwack	49	10	121	57	21						50 4	–	0 5	12	05	0	11	19	0		24	12	7																		
Enderby	50	32	119	7	1180						15 1			7	07	0	1	15	18	0		26	19	9																		
Fairview	49	11	119	36							52 3			2	75	0	13		29	0		27	28	9																		
Fruitvale	49	9	117	31							45 9			1	73	0	8		10	5		28	21	3																		
Glacier	51	14	117	29	4052						37 1			10	33	0	15		14	0		27	9	4																		
Golden	51	16	116	55	2260						42 2			9	61	0	15		17	0	27	28	16	3																		
Holberg	50	39	128	18							47 6			2	50	1	15		33	1		26	7	5																		
Hedley	49	34	120	10	1771						47 1			7	68	0	8		22	0		25	18	8																		
Hedley (Nickel Plate)											36 5			5	60	0	1.5	16	12	0		26	20	1																		
Hope	49	23	121	25	60						47 4			1	62	0		15	30	5	26	28	11	8																		
Ikeda Bay	52	17	131	7							41 6			3	56	0	13	18	32	0		25	11	0																		
Kamloops	50	41	120	20	1245	29	96	30	61	29	30	1	31	18	3	+	0 2	20	71	6		6		24	5		27	17	7	73	6	3	2	11	17	6	1	3	7	1	11	62		6	15	0		0 66		0 10	0	26	13	18	1	0	0	0
Ladner	49		123	4							51 0			8	63	0	18		28	0		27	14	0																		
Massett, Q.C.I.	53	38	132	9	30						46 7		0 0	12	57	0	11	18	34	0	30	31	12	3																		
aNanaimo	49	10	123	57	125	29	95	30	46	29	20	22	1	21	19	2	0 0	10	65	0	6		28	0		28	11	5	46	6	8	0	4	1	15	0	2	4	12	27	62		8	30	0	DSW	3 66	0	86	0	83	16	1	0	0	3
Nicola Lake	50	9	120	30	2120						45 7	+	4 3	15	65	0	19		20	0		27	18	6																		
North Nicomen	49	12	122	2	30						51 1	+	0 7	17	66	0	11		34	0		26	12	9																		
New Westminster	49	13	122	54	330	30	01	30	47	29	30	1	11	19	9		0 0	23	65	2	15		31	1		26	11	1	92	7	15	0	2	19	1	4	3	3	3	27	62		8	8	0		3		0	1	8	18	1	0	0	4
Needles	49	10	118	6							47 0			1	63	0	6		23	0	27	28	18	3																		
Nelson	49	29	117	21	1760									10																												
Okanagan Mission (Kelowna)	49	52	119	29	1200						46 0		0 1	11	63	0	8		21	0		27	13	8																		
Princeton	49	28	120	29	1650						44 1	+	0 2	16	65	0	15		18	0	27	28	10	1																		
Penticton	49	29	119	35							48 9			1	62	0	6	8	20	5		26	20	3																		
Pemberton Hatchery	50	20	122	33							40 0			3	59	0	18		25	0	26	28	12	6																		
Prince Rupert	54	18	130	18	170	29	82	30	46	28	28	16	1	31	16	7			1	60	5	17		31	0	26	31	11	2	93	8	19	3	0	14	19	10	5	0	1	10	62		8	1	20	0		18	1		3	01		6	1	0	2
Quesnelle	52	59	122	30	1700						39 8	–	3 5	14	63	0	1		9	0		26	23	3																		
Revelstoke	51	0	118	0	1470						44 7		1 3	11	62	0	15		21	0		27	13	5																		
Rossland	49	5	117	48	3800						44 1			7	65	0	8		23	5		27	14	6																		
Ruskin (Stave Falls)	49	16	122	23	125						51 7			1	69	0	2		32	0	20	27	11	6																		
Stuart's Lake (Fort St. James)	54	28	124	12	2280						38 5		1 8	17	56	5	1	20	18	0		26	21	0																		
Salmon Arm	50	12	119	35	1215						46 0			9	68	0	15		22	0		28	10	0																		
Steveston (Garry Point)	49	21	123	17							49 0		0 4	13	64	5	10		26	5		28	11	1																		
Swanson Bay	250	35	128	50							45 3			3	54	0	7	18	32	0		21	8	4																		
Salt Spring Island	48	50	123	20							49 0			1	63	0	6		31	5		28	11	7																		
Summerland	49	37	119	40	1100						46 8			1	71	0	8		24	0		27	16	3																		
Stewart	56	1	130	1	215						39 7			1	58	0	3		27	0	25	26	11	5																		
Tobacco Plains (Elko)	49	1	115	5	2681						49 3	+	3 6	11	74	0	9		29	0		27	16	4																		
aTranquille	50	41	120	20		28	76	29	18	28	08	1	10	18	2				72	0		6		21	0		27	18	5	69	8	3	2	11	11	11	2	6	3	7	8	62						0 15		1 30	0	0	0	0
Triangle Island	50	52	129	5	680	29	96	30	46	29	28	1	18	4	16				1	51	0		1	36	0			5	2	91	9	20	0	2	1	30	2	14	1	12	0	62	19	0		7	80		10	75		1	0	25	6	0	0	16
Vernon (Coldstream Ranch)	50	14	119	15	1575						45 7	+	1 7	17	67	0	6		21	0	26	27	11	6																		
Victoria	48	24	123	19	85	30	03	30	51	29	30	1	17	50	9		0 6	18	62	7	15		35	7		26	10	1	81	8	12	11	3	0	6	9	9	2	3	11	62	6	2	21	0	1	SW	1 01	2	83	1	35	16	1	0	0	3
Vancouver	49	17	123	5	130	30	06	30	51	29	30	1	20	50	4	+	0 8	12	65	7	15		32	3		28	9	3	80	7	13	0	0	20	13	2	10	5	1	8	62	1	1	18	0		–	0 01	2	82	1	32	1	1	0	0	0
Winter Harbour	50	32	128	3							48 8			0	0	0	13	63	0		25	31	0		26	11	9																		

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, OCTOBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of overcast	No. of days clear above	No. of days
	° ′	° ′		in.	in.	in.	in.																																	
SASKATCHEWAN *Con.*																																								
Strassburg	51 5	101 56						41 6	—		86 0	8	17 0	31	25 9																	0 32	— 0 51	0 19	2	29	0	0	0
Scott (Hearts Hill)	51 30	109 30									76 0	8																				0 13		0 07	3	28	0	0	1
Waseca	53 6	109 29						40 5			68 0	15	8 0	27	22 8					0	1	1	4	2	2	9	8	4	31				0 05		0 05	1	30	1	0	0
Yarkton	51 11	102 29						43 5			82 0	10	18 0	27	29 9																	0 50		0 30	2	29	0	0	0
MANITOBA—																																								
Almasippi	49 14	99 20						45 8			88 5	9	16 0	28	26 3																	1 13		0 50	5	25	0	1	0
Aweme (St. Alban's)	49 42	99 34	1180	28 91	29 09	28 07	1 02	45 7	+ 1 1	26	88 5	8	12 0	28	26 3																	0 36	0 70	0 16	4	27	3	0	0
Brandon	49 51	99 57	1176					44 9	— 1 0	23	85 1	9	8 0	28	28 4			4	0	2	19	1	3	3	8	9	16	0	93	1	11		0 03	0 83	0 03	1	30	0	0	0
Berens River	52 18	97 23	710					42 0			67 0	16	20 0	29	22 9					7	0	12	1	15	4	3	17	0	62				0 30		0 30	1	30	0	1	0
Carberry	49 52	99 26	1258						6																							0 07		0 07	1	30	0	0	0
Carman	49 31	98 0	872					43 6			82 0	10	10 0	28	28 1																	1 16		0 59	4	27	0	0	0
Cypress River	49 33	99 3	1232					43 5			83 0	10	9 0	28	27 8																	0 35		0 15	3	28	0	0	0
Hillview	49 55	100 33	1400					44 0	+ 1 8	25	81 0	9	9 0	29	25 1			3	3	4	9	9	1	1	39	7	30	2	93				0 35	0 95	0 20	2	29	5	0	0
Minnedosa	50 15	99 50	1699	29 92	30 15	29 21	1 21	44 5	+ 3 9	27	81 5	9	9 1	29	25 0					3	1	4	1	0	1	7	7	38	62				0 18	0 87	0 09	4	27	6	0	0
Morden	49 11	98 6	978					47 0			85 5	10	18 0	28	26 0																	1 42		0 53	6	25	0	0	0
Moose Horn Bay Aitkensville	51 15	99 33						43 1	—		74 0	10	12 5	28	22 6					9	7	4	7	2	5	4	10	7	55				0 31		0 25	3	28	7	0	0
Ninga	49 14	99 51	1619								86 0	16	9 2	28																						1				
Oakbank	49 57	96 42	740					44 8	+ 5 7	15	76 0	7	9 17 0	29	20 6					6	0	2	0	3	6	5	9	0	31				0 63	0 80	0 40	3	28	0	1	0
Pipestone	49 34	100 58	1400					43 3			87 0	8	10 0	28	30 6																	0 30		0 30	1	30	0	0	0
Portage la Prairie	49 57	98 17	830					45 7	+ 3 8	20	84 0	9	16 0	27	24 5																	0 15	— 1 05	0 15	1	30	0	0	0
Portage la Prairie (2)	49 56	98 17						45 2			79 0	17	17 0	28	24 1																	0 23		0 10	3	28	0	0	0
Pierson	49 11	101 5	1531					43 2			84 0	10	10 0	29	30 5																	0 67		0 25	3	28	0	0	0
Stony Mountain	50 10	97 14	803					45 2	+ 2 1	30	79 0	10	17 14 0	31	29 0					6	5	5	0	13	4	10	19	0	62	111	VI	29 S	0 58	0 46	0 33	2	29	0	0	0
Swan River	52 6	101 15	1112					42 1			87 0	9	12 0	31	24 6																	0 32		0 16	2	29	0	0	0
Treherne	49 36	98 40	1212					46 7	+ 1 6	15	83 0	9	14 0	28	22 3																	0 63	— 0 50	0 30	6	25	3	0	0
Virden	49 51	100 55	1441					43 7			85 0	9	10 0	28	25 5																	0 10		0 10	1	30	0	0	0
Winnipeg	49 53	97 7	760	29 91	30 43	29 27	1 16	46 8	+ 5 3	37	78 2	16	18 8	28	21 3					3	5	5	8	11	1	15	12	2	62				1 08	0 44	0 42	5	26	3	0	0
ONTARIO—																																								
Alton	43 51	80 5	1250					46 4	+ 2 2	24	80 2	19	13 3	29	24 4			3	2	14	1	10	4	21	8	31	1	0	93	11	IV	1 W	3 28	+0 43	1 06	8	23	0	2	3
Aurora	43 57	79 24	886					48 5			75 8	18	22 9	29	19 2																	2 85	+0 24	1 45	7	24	0	2	3
Agincourt	43 47	79 16	590					49 7	— 1 0	14	72 0	18	24 2	30	17 5					10	0	15	3	7	12	20	24	2	93				2 47	— 1 83	0 91	10	21	6	2	0
Barrie	44 23	79 41	839																																					
Beatrice	45 8	79 20	800					46 2	— 2 9	22	74 0	18	19 0	30	20 4			5	8	10	1	1	10	12	5	4	16	34	93	1	V	1 W	4 52	+1 41	1 20	10	21	2	1	3
Bruce Mines	46 18	83 55	595					46 8	+ 1 3	12	75 0	18	21 0	29	18 8																	3 62	+0 33	1 20	13	18	2	3	4
Birnam	43 2	81 55	600					50 5	+ 1 7	27	76 0	18	15 2	30	14 9					10	5	1	1	17	7	3	10	2	62				3 58	+0 69	1 00	9	22	3	3	0
Brantford	43 10	80 21	750					48 9	+ 1 0	30	77 0	18	24 0	29	21 4																	2 69	+0 11	1 21	5	26	0	1	1
Bloomfield	43 59	77 21	265					49 1	+ 0 1	10	71 0	5	6 23 0	30	18 6																	3 25		1 05	6	25	0	0	0
Bancroft	45 1	77 50						43 7	— 0 3	19	75 0	18	16 0	28	20 8																	2 58	0 30	1 18	4	27	0	0	0
Copper Cliff	46 30	80 59						44 9			72 0	18	19 21 0	28	18 7																	3 15		1 22	8	23	0	1	1
Clinton	43 32	81 37						47 4			85 0	19	12 0	29	18 6					7	1	7	8	18	3	5	13	0	62				3 91		0 80	12	19	2	0	1
Coldwater	44 38	79 40	600					44 6	— 1 1	23	80 0	18	17 0	11	29 28 1																	3 15	+0 06	0 79	5	26	0	0	0
Cottam	42 7	82 45	646					51 9	+ 1 2	22	83 0	3	10 0	28	27 8					20	0	6	11	17	3	0	5	0	62				2 52	— 0 50	1 77	5	26	0	0	0
Chatham	42 23	82 12	595					53 9	+ 3 7	24	82 0	18	23 0	30	21 5																	3 28	+0 74	1 43	6	25	0	0	0
Cochrane	49 2	81 0		30 09	30 30	29 53	0 90	39 3			73 5	19	17 0	13	29 17 6					0	3	1	8	5	7	0	13	23	62				2 60		0 73	12	19	2	0	0
Collingwood	44 31	80 2										16	21 0	29																										
East Toronto	43 35	79 18						49 1			72 0	1	23 0	29	20 3																	2 18		0 86	9	22	2	0	0
Elora	43 41	80 24	1274					49 2	+ 1 9	13	81 0	19	21 0	29	21 6																	2 94	0 13	0 60	11	20	0	0	0
Gravenhurst	44 54	79 20	770					45 6	+ 0 6	10	74 0	18	20 0	13	30 29 5			1	2	27	3	3	12	20	8	5	8	7	93	11	V	1 W	3 90	+0 59	1 20	8	23	11	0	0
Guelph	43 33	80 16	1050					50 0	+ 3 9	24	78 0	18	22 0	29	17 9																	3 03	+0 81	0 88	13	18	0	1	0
Grimsby	43 13	79 36	282					52 9			78 0	5	26 0	30	17 6																	1 19		1 20	8	23	0	0	0
Haileybury	47 29	79 39	687	29 97	30 58	29 31	1 27	41 2	+ 1 7	16	73 7	18	32 5	13	16 2					12	1	0	2	15	10	4	13	5	62	11	V	15 W	3 36		0 67	15	16	6	1	2
Hamilton	43 16	79 54	303					52 9	+ 2 7	35	73 0	19	36 0	8	24 13 5																	3 31	+0 95	1 21	8	23	0	0	0
Haliburton	45 1	78 28	1050					46 1	+ 2 1	23	75 0	18	16 0	3	29 3																	4 55	+1 94	1 80	5	26	2	1	0
Kenora	49 48	94 32	1102					40 6	— 1 5	12	70 0	1	20 0	28	31 14 6																	1 15		1 00	3	28	6	2	0

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, OCTOBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'tn	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more	No. of fair days.	No. of auroras.	No. of thunder storms	No. of fogs.
NEW BRUNSWICK—																																								
Bathurst	47 39	65 42	45																																					
Chatham	47 3	65 29	21	29 89	30 18	29 23	1·25	45 0	− 0·3	36	75 0	6	21 0	22	15·6			6	5	2	1	8	0		21	14	15	1	62				3·78	+0·60	0·84	17	14	0	1	0
Dalhousie	48 4	66 22	30					43 5	+ 0·2	35	65 0	6	30 0	29	12 0					1	1	8	1	0	17	4	1	31				1·52	—	0·75	5	26	0	0	0
Fredericton	45 57	66 38	161	29 92	30 18	29 27	1·21	44 4	+ 0·2	37	77 5	6	32 8	31	19 6		85	6	9	4	5	2	8	4	16	37	4	93	9 6	21 7	—	2·56	1·91	0·57	12	19	2	1	1
Grand Manan	44 47	66 46	49	29 92	30 50	29 31	1·19	48 8	− 3·7	36	64 6	6	32 0	30	12 3					1	2	1	1	1	13	11	17	1	62				2·58	1·72	0·90	10	21	0	1	2
Moncton	46 9	64 45	50					44 3	− 0·5	13	71 0	6	23 0	21	17 3					1	2	1	1	0	3	19	0	31				4·47	0·29	0·72	12	19	0	1	0
*Point Lepreaux	45 4	66 28	30					47 0	+ 0·3	32	69 0	11	33 0	31				5	8	8	1	1	1	0	2	9	2	0	31				3·37	0·84	1·65	10	22	0	1	3
St. John	45 17	66 4	70	29 91	30 19	29 21	1·28	47 0	0·1	37	61 5	11	30 7	22	11 5			6	10	8	2	4	1	0	3	12	3	0	78	11	V	12 S W	3·82	0·33	0·62	17	14	2	1	3
St. Stephen	45 11	67 16	35					46 0	+ 0·2	13	75 0	5	26 0	31	19 5					1	2	1	0	0	2	13	0	31				1·95	2·13	0·44	8	23	0	0	0
Sussex	45 43	65 38	60					46 0	+ 0·8	13	69 0	6	21 0	22	18 8					0	5	0	0	0	5	4	6	11	31				3·90	0·08	1·65	8	23	0	0	0
NOVA SCOTIA—																																								
Halifax	44 39	63 35	88	29 89	30 52	29 15	1·37	48 6	0·2	36	71 5	6	28 0	4	14 9					4	15	2	2	2	8	16	13	0	62				3·62	0·56	2·37	18	13	0	0	1
Port Hastings	45 39	61 32	15					51 1		19	68 0	16 25	32 0	12	15 3					0	4	0	1	0	9	0	8	0	31				7·98	2·70	1·35	10	21	0	0	0
Parrsboro'	45 23	64 19	40					44 6	1·9	14	63 5	1	29 0	24	19 7																										
Sydney	46 10	60 10	35	29 85	30 15	29 15	1·30	48 3	+ 0·8	37	75 0	6	29 1	22	15 2					0	2	1	6	0	11	10	18	4	62				8·88	3·90	2·14	21	10	0	2	0
*Sable Island, E. Point	43 58	59 46	27																																					
Truro	45 22	63 18						46 6	+ 0·1	36	75 3	6	21 2	11	17 9					10	6	1	5	9	20	11	21	7	90				7·72	3·14	1·95	20	11	1	2	1
Windsor	44 59	64 6	90					47 3		8	8	0	23 0	22	17 6																									
*Whitehead	45 15	61 8	20					48 7	+ 0·2	27	65 0	1	38 0	31						8	9	6	7	6	23	16	18	0	93				4 72		2 66	16	15	0	0	0
*aWolfville	45 7	64 21		29 85	30 12	29 13	1·29	48 1	+ 0·3	10	78 2	6	28	22	15 6					6	5	3	3	4	10	8	16	5	62				8 62	2·47	1·19	9	22	0	0	0
Yarmouth	43 50	66 2	65	29 91	30 33	29 34	1·19	49 2	+ 0·9	30	65 3	6	28 5	15	12 9					13	3	3	2	7	13	3	16	0	62				4 10	+ 0·12	1·63	16	15	4	1	4
P. E. ISLAND—																																								
Charlottetown	46 14	63 10	38	29 87	30 30	29 24	1·07	50 1	− 3·0	35	71 0	9	32 0	31	10 0		81			1	10	4	2	3	9	21	9	3	62	8·0	21 5	16 W	7·33	2·02	1·31	18	13	1	1	1
Charlottetown (2)	46 13	63 10	75					46 7		19	0	6 7	29 0	11	13 8																			6·78		1·77	7	7	0	1	0
NEWFOUNDLAND—																																								
*Amour Point	51 28	56 51																																						
Burin	47 0	55 10	27	29 85	30 33	29 06	1·27	46 0		2	63	1	30 0	16	22 13	4				1																			
*Cape Norman	51 38	55 52						38 0	− 0·7	26	47 0	8	28	31 0		14																									
Fogo	49 43	54 17	30	29 77	30 26	28 86	1·09	46 7		1	68 0		30	32 0	13	21	13 7			7	4	1	5	5	17	13	10	2	62				6 25		1·17	20	11	0	0	2
*Point Rich	50 42	57 25	35					41 1	0·2	26	57 0	6	32 0	13	25					18	6	8	6	12	7	22	13	1	93				8 66		2·00	11	17	1	0	7
Port aux Basques	47 34	59 10	27	29 79	30 38	29 03	1·35	43 3		2	58 5	1	29 5	22	10 0					6	1	20	1	2	3	16	12	1	62				6 07	2·56	1·10	14	17	0	0	1
St. John's	47 31	52 42	125	29 80	30 37	28 98	1·39	47 2	+ 1·8	37	68 0	2	30 0	22	13 6			6	5	4	2	1	9	11	21	3	12	1	62				11 32		2·49	28	3	0	0	1
BERMUDA—																																								
Prospect	32 17	64 39	151	30 08	30 10	29 77	0·63	72 9	− 0·3	20	83 0	1	63 8	27	9 7					19	5	9	2	10	2	5	9	1	62				7 92	− 1·68	1·68	19	12	0	2	3

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING OCTOBER, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alkali Lake	0·93	7	24	0·30	15					
Annis	1·13	15	16	0·89	3					
Beaver Lake	5·31	13	18	1·00	2					
Coquitlam	11·23	10	21	2·01	8					
Denman's Island	6·85	10	21	2·20	8					
Ferguson	5·16	13	18	0·86	6	7·0	2	5·0	21	
Goldstream Lake	9·03	19	12	2·01	21					
Grand Forks	0·75	7	21	0·21	2·16					
Hornby Island										
Jordan River	11·19	19	12	2·18	21					
LittleQualicum(French Creek, V.I.)	6·18	11	20	1·50	8					
Monte Creek	1·78	5	26	0·15	4					
Naas Harbour	13·67	21	7	1·84	19					
Sooke	6·40	15	16	1·30	5					
Skidgate	9·52	25	6	1·38	8					
ALBERTA—										
Bardo	0·56	2	29	0·46	10		1		10	
Bismark	R	3	28	R	10-11-12					
Bruederheim	0·82	5	26	0·31	17		1		11	
Bittern Lake	0·15	3	28	0·08	11	0·7	2	0·5	31	
Bantry										
Brooks	0·72	5	26	0·32	1					
Conjuring Creek	0·38	2	29	0·33	12					
Coutts	R	0	31	R	1					
Campsie	0·83	9	22	0·36	16		2		10-31	Aurora on 3, 24, 26, 27, 29. Fog on 13. Thunder on 3, 5, 28.
Dorenlee	0·07	2	29	0·05	18					
Elkwater										
Grassy Lake	1·00	1	30	1·00	7					
Jumping Pound	0·49	4	27	0·30	18		3		1-17-18	
Lacombe	0·80	1	30	0·80	11		1		25	
Langdon										
Loch Sloy	0·27	6	25	0·15	18					Aurora on 1, 5, 6, 7, 8.
Macleod	0·62	3	28	0·28	2	3·0	1	3·0	26	
Mayton										
Okotoks	0·30	2	29	0·25	18	2·5	1	2·5	25	
Ponoka							1		18	
Sion	0·91	8	23	0·25	10	2·5	1	2·5	10	Aurora on 1, 2, 3, 4, 12, 13, 15, 20, 22, 24, 25, 26, 27, 29. Fog 13.
Tilley	0·78	4	27	0·28	4					
Wabamun										
SASKATCHEWAN—										
Elm How	0·76	5	26	0·50	31	1·5	2	1·0	31	
Hanley						5·0	1	5·0	5	
Kindersley	0·05	2	29	0·03	18					
Last Mountain										
Maple Creek	0·52	6	25	0·21	5					
MANITOBA—										
Cartwright	1·15	6	25	2·60	18	1·3	1	1·3	26	Aurora on 1, 3, 27. Thunder on 2.
Deloraine										
Gretna	1·20	2	29	0·73	18					
Norquay	0·39	1	27	0·20	19		1		27	
Rapid City	0·90	2	29	0·50	4		1		27	
ONTARIO—										
Arden	2·55	10	21	0·74	7	2·0	1	2·0	29	Thunder on 2. Fog on 20.
Deer Park	2·25	7	24	0·91	5					
Dutton	1·90	3	28	0·75	6					Thunder on 21st.
Emsdale	4·33	14	17	0·85	5		3		26-27-28	Aurora on 7, 12, 23. Thunder on 1. Fog on 15.
Goderich										
Georgetown	2·41	12	19	0·83	6		2		28-29	Thunder on 21st.
Grantham	3·64	7	24	1·39	7					
Grand Valley	2·68	8	23	0·71	5	2·2	2	1·6	28	
MacCue	2·87	5	26	1·36	7		1		28	
Orangeville	2·36	5	26	0·68	7	2·2	1	2·2	28	
Princeton	3·21	3	28	2·20	6					Thunder on 21st.
Sydenham	1·30	4	27	0·15	27					
Strathroy	2·57	5	26	0·75	6	7·0	2	4·0	28	
Watford	2·10	5	26	1·01	6					
Westport	3·66	6	25	1·52	6					Thunder on 1st.
Wooler	2·82	6	25	1·13	6					
Westminster	3·21	3	28	2·08	6	0·9	1	0·9	29	
Wiarton	3·94	8	23	1·04	5					Thunder on 21st.
Wesley	2·55	8	23	0·61	5	4·0	3	2·0	28	Thunder on 21, 27.
QUEBEC—										
Timiskaming	3·20	9	22	0·90	3					
NEW BRUNSWICK—										
Point Escuminac	3·41	11	20	0·53	15		1		14	Fog on 20th.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF OCTOBER 1910

STATIONS	Hours Ending																			
	1 a.m.	2 a.m.	3 a.m.	4 a.m.	5 a.m.	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	Noon.	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.
Victoria								07	22	26	31	38	35	33	29	29	09				
Nanaimo								09	22	31	14	19	14	14	10	12	20				
Vancouver								11	26	35	39	39	41	39	39	40	25	T			
Agassiz								06	25	24	26	28	26	32	22	19	04				
Tranquille								07	33	38	35	28	29	12	38	31	16				
Summerland								21	36	41	37	40	39	15	14	28	10				
Kamloops								16	18	16	33	17	37	04	07	26	03				
Edmonton								15	36	38	33	32	37	61	57	43	24				
Lethbridge						01	25	49	52	49	33	06	60	67	63	14	11				
Lacombe								29	49	51	62	60	64	65	59	18	36	01			
Medicine Hat							26	52	58	65	61	06	49	17	16	28	01	..			
Fort Vermilion																					
Battleford																					
Indian Head								27	57	61	67	72	06	67	62	52	28				
Moosejaw							02	40	60	67	68	67	67	71	68	61	42	09			
Dunvegan																					
Brandon						18	60	72	60	70	68	67	60	63	45	09					
Winnipeg								15	18	30	68	72	74	71	65	36	13	03			
Haileybury						01	16	29	32	12	14	11	15	10	37	27	01				
Woodstock								11	51	06	50	55	65	62	60	50	31	02			
Lindsay									19	38	11	15	16	11	42	16	01	T			
Barrie								11	30	40	30	20	35	37	01	37	11	18			
Toronto								23	60	68	63	50	60	68	64	56	30				
Kingston							T	20	11	18	51	56	60	51	56	15	16				
Ottawa							02	29	50	56	56	51	55	60	53	12	33	05			
Montreal							T	23	35	18	48	39	46	19	47	28					
Quebec							01	17	29	38	39	38	37	45	45	46	29	01			
Sherbrooke							01	18	31	34	35	10	10	30	39	35	24				
Fredericton							01	27	11	50	17	52	17	55	51	11	30				
Charlottetown							01	16	26	31	31	29	36	31	23	28	17				
Dunvegan Alta							01	12	11	57	51	03	61	63	50	43	17	01			

—	Victoria.	Nanaimo.	Vancouver.	Agassiz.	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw.	Brandon.	Winnipeg.	Haileybury.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa.	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.	Dunvegan, Alta.
Actual duration in hours	41	49	101	69	99	106	127	178	185	165	154			171	191		180	178	111		162	90	176	171	138	153	113	113	104	138	83	136
Percentage of possible duration	21	32	31	20	26	32	38	11	19	40	16			51	57		56	53	33		16	27	17	50	11	15	38	33	30	11	25	11
Difference from average	-11		-	15			-	-	-	-	-		-	+13	—		-17	-13	—		-7	13	13	+7	-1	-10	2			2	+9	
Maximum percentage in one day	84	86	92	81	72	84	79	83	91	91	90			90	96		91	93	96		88	69	86	86	84	92	88	90	84	92	89	92
Date of maximum	26	20	25	26	12	21	26	19	27	26	27			21	27	..	21	30	7		16	16	13	31	15	26	12	21	21	21	22	26
No. of days completely clouded	13	10	12	18	6	5	4	4	6	4	4			5	3		2	4	7		1	13	3	3	7	6	9	3	6	6	13	5

Aurora recorded:—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Waitefield, IV; Three Hills Creek, III; Red Deer, I; Schreiber III; Kakabeka Falls, II; Clinton, Birnam, IV; Bruce Mines, IV; Cartwright, III; Loch Sloy, Haileybury, III; Maple Creek, III; Estevan, IV; Crescent Lake, IV; Gravenhurst, IV.

2. Waitefield, III; Pakan, III; Chicoutimi, Fredericton, II; Haileybury, IV; Maple Creek, III; Chaplin, IV; Quebec, III.

3. Waitefield, II; Red Deer, IV; Pakan III; Hillview, IV; Aweme, II; Agincourt, IV; Schreiber, II; Kakabeka Falls, III; Cartwright, IV; Wolfville, IV; Treherne, IV; Maple Creek, IV; Muenster, II; Chaplin, IV; Brownlee, Gravenhurst, IV; Campsie, II; Port Arthur, I; St. John, IV; Truro.

4. Waitefield, IV; Threehills Creek, III; Kakabeka Falls, IV; Waseca, Brownlee, Minnedosa, I.

5. Waitefield, IV; Threehills Creek, IV; Hillview, II; Aweme, III; Kakabeka Falls, IV; Loch Sloy, Treherne, IV; Maple Creek, IV; Crescent Lake, IV; Winnipeg, III; Fort Vermilion.

6. Loch Sloy, Maple Creek, III; Cochrane, IV.

7. Waitefield, III; Hillview, II, Moose Horn Bay, III; Aweme, IV; Agincourt, Beatrice, IV; Madoc, I; Lake Talon, IV; Haliburton, Birnam, IV; Chicoutimi, Emsdale, IV; Loch Sloy, Haileybury, III; Treherne, IV; Esterhazy, IV; Gravenhurst, II; Renfrew, III; Cochrane, IV; Father Point, III; Quebec, III.

8. Waitefield, IV; Threehills Creek, IV; Red Deer, IV; Moose Horn Bay, IV; Loch Sloy, Wolfville, IV; Melfort, III; Minnedosa, II; Fort Vermilion.

9. Esterhazy, II.

10. Agincourt, IV; Wolfville, IV; Gravenhurst, III; Fort Vermilion.

11. Red Deer, IV; Hillview, IV; Moose Horn Bay, IV; Aweme, II; Foxleigh, Muenster, IV.

12. Hillsdown, IV; Beatrice, IV; Madoc, II; Lake Talon, Haliburton, East Toronto, Clinton, Hope, Bruce Mines, II; Emsdale, II; Fredericton, I; Wolfville, IV; Haileybury, III; Esterhazy, III; Gravenhurst, III; Stonecliffe, II; Southampton, IV; St. John, III; Minnedosa, I.

13. Red Deer, IV; Birnam, III; Esterhazy, III; Fort Vermilion.

14. Red Deer, IV.

15. Schreiber, IV; Fort Vermilion.

16. Schreiber, IV; Fort Vermilion.

17. Muenster, I.

18. Charlottetown, IV.

19. Waitefield, III; Threehills Creek, IV; Moose Horn Bay, IV; Chaplin, IV; Crescent Lake, IV; Winnipeg, II.

20. Lake Talon, IV; Quebec, IV.

21. Halkirk, Father Point, III; Winnipeg, III.

22. Schreiber, IV; Esterhazy, IV; Muenster, IV; Minnedosa, II.

23. Lake Talon, Kenora, IV; Emsdale, IV; Haileybury, III; Muenster, I; Gravenhurst, IV.

24. Waitefield, IV; Aweme, IV; Schreiber, IV; Kenora, IV; Melfort, IV; Campsie, IV; Fort Vermilion.

25. Waitefield, II; Three Hills Creek, IV; Hillsdown, III; Moose Horn Bay, IV; Aweme, II; Ninga, Agincourt, III; Lake Talon, Kenora, IV; Haileybury, IV; Foxleigh, Esterhazy, I; Chaplin, IV; Crescent Lake, III; Gravenhurst IV; Minnedosa, IV; Fort Vermilion.

26. Waitefield, III; Pakan, I; Halkirk, Hillsdown, IV; Aweme, IV; Schreiber, IV; Kakabeka Falls, III; Kenora, IV; Foxleigh, Gravenhurst, III; Campsie, IV; Quebec, IV; Fort Vermilion.

27. Threehills Creek, III; Halkirk, Moose Horn Bay, II; Agincourt, II; Schreiber, IV; Kakabeka Falls, III; East Toronto, Cartwright, III; Foxleigh, Muenster, I; Grenfell, II; Estevan, III; Melfort, II; Brownlee, Cannington Manor, Crescent Lake, III; Gravenhurst, III; Princeton, III; Okanagan Mission, Summerland, Hope, II; Campsie, II.

28. Agincourt, III; Kakabeka Falls, I; Kenora, IV; Foxleigh, Esterhazy, III; Brownlee, Gravenhurst, IV; Minnedosa, I.

29. Waitefield, III; Hillsdown, IV; Kenora IV; Foxlegh, Brownlee, Gravenhurst, IV; Campsie, IV; Father Point, III; Fort Vermilion.

30. Waitefield, III; Brownlee, Crescent Lake, III.

31. Waitefield, IV; Moose Horn Bay, IV.

Thunder recorded.

1. St. John, Quebec, Montreal, Parry Sound, Port Stanley, Chilliwack, North Nicomen, Renfrew, Ottawa, Emsdale, Fredericton, Wolfville, Haileybury, Okanagan Mission, Fruitvale, Salmon Arm, Agincourt, Peterboro', Paris, Otonabee, North Gower, Madoc, Haliburton, Copper Cliff, Bruce Mines, Brome, Lake Edward, Shawinigan Falls Point Lepreaux, St. Stephen, Moncton, Chatham, N.B., Grand Manan, Yarmouth.
2. Oakbank Minnesippi, Kenora, Charlottetown, Cartwright, Arden, Georgetown.
3. Lake Talon Bruce Mines, Okanagan Mission, Hope, Campsie, Parry Sound, Sydney.
4. Shawinigan Falls, Saskatoon, Quebec.
5. Peterboro', Campsie.
8. Okanagan Mission.
13. Lake Talon.
16. Golden.
17. Schreiber, Chilliwack, North Nicomen.
18. Kakabeka Falls Kenora.
19. Lake Talon, Bruce Mines, Haileybury, Port Arthur.
20. Lake Talon, Birnam, Haileybury, St. John.
21. Agincourt, Beatrice, Point Clark, Midland, Lucknow, Aurora, Princeton, Ont., Wiarton, Wesley, London, Toronto, Dutton, Port Stanley, Southampton.
22. Paris, Owen Sound, Port Stanley, Parry Sound.
23. Sydney, Truro.
25. Birnam.
27. Wallaceburg, Paris, Lucknow, Brantford, Birnam, Aurora, Wesley, London, Port Stanley.
28. Point Clark, Campsie.

FORECASTS FOR OCTOBER, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1303. These were divided as follows:

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per centage.
Alberta	77	51	18	5	81·8
Saskatchewan	78	62	13	3	87·8
Manitoba	78	65	11	2	90·4
Lake Superior	113	83	25	5	84·5
Georgian Bay	127	90	23	4	87·0
Lower Lake Region	127	97	23	7	85·4
Ottawa Valley	109	79	24	6	83·5
Upper St. Lawrence	109	80	23	6	83·9
Lower St. Lawrence	126	91	24	11	80·5
Gulf	126	88	24	11	79·4
Maritime Provinces West	117	84	23	10	81·6
Maritime Provinces East	116	78	29	9	79·7
Total	1303	949	257	86	83·5

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
December, 1910.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. NOVEMBER, 1910. No. 11.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

Generally, the weather of the month of November was colder than the normal from the Pacific Coast to Quebec, but from that province to the Atlantic, warmer.

The mean temperature was lower than the normal over the greater part of British Columbia, the deficiency ranging from 1° in the southern districts of Vancouver Island to 4° along the upper reaches of the Fraser. Over the southern portion of the province, however, there were many exceptions. In the Nicola Lake and Similkameen districts and at Kamloops the normal mean temperature was exceeded by nearly 3°, while near the mouth of the Fraser some stations reported temperatures below and others about 1° above. In the Kootenays, however, 1° to 2° below was reported.

Along the western coast of Vancouver Island and in the Queen Charlotte Islands the precipitation of November was less than normal, but elsewhere in the province, with very few exceptions, the total for the month was well above. The rainfalls on the 10th and 11th and on the 21st were very heavy in all districts.

In southwestern Alberta the mean temperature was between 1° and 2° above the normal, and in southeastern districts was about 1° below, but over the remainder of the province from the height of land north of Calgary to Edmonton and beyond, was 3° or more below. Precipitation was less than the normal in nearly all districts.

In Saskatchewan the mean temperature was below normal 1°·5 in the northern districts and 4° to 5° in the southern portion of the province. On the 4th, 12th and 26th there were heavy falls of snow in the eastern portion of the province. The total precipitation was greater than the normal except in some districts of the southwest.

The mean temperature of November was 4° below the normal in western Manitoba, while in the eastern portion of the province the month was much warmer with a mean temperature only 1°·5 below normal. The month ended with temperatures about 10° below zero. A very heavy snowfall, amounting to from 10 to 12 inches in many localities, occurred on the 26th. The precipitation of the month exceeded the average November amount.

Over New Ontario from Port Arthur eastward to the Ottawa Valley the mean temperature of November was nearly normal, and locally in the District of Algoma exceeded it by 1°. Over the remainder of the province, however, temperatures were, on the average, about 2° below normal. In the fruit districts of the south the deficiency was especially marked, amounting to 4° and 5° along the north shore of Lake Erie. Except locally in the counties of Elgin, Middlesex and Bruce, the precipitation was less than the normal.

In the counties of Quebec lying near the confluence of the Ottawa and St. Lawrence Rivers, the mean temperature was nearly normal. In the Abitibi region there was a deficiency of approximately 1°, while along the Middle and Lower St. Lawrence and Gulf there was an excess over normal temperature, increasing from 2° at Quebec to nearly 5° in the Gulf. In the Abitibi and Gulf regions more than the average precipitation was reported, but elsewhere in Quebec there was a deficiency.

In the southern districts of the Maritime Provinces the mean temperature differed very little from normal, but in the northern counties and in Prince Edward Island there was an excess of about 2°. The precipitation was generally deficient, although there were many exceptions.

The month of November in Newfoundland was characterised by mean temperatures about 4° or 5° above normal and heavy precipitation.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for November was below the average in British Columbia, and from Lake Superior to the Maritime Provinces, inclusive, and above the normal in the Western Provinces.

Many low barometer readings were recorded in the Maritime Provinces, and the mean value was from 0·24 to 0·32 of an inch below the normal.

In the Western Provinces, departures from average were small, the extreme being+0·04 of an inch.

HIGH AREAS.

Seven areas of high pressure were sufficiently well defined to allow of their paths being charted. Two first appeared in the Yukon Territory, three on the British Columbia Coast, one in the North Pacific States and one in Northern Saskatchewan. The systems were for the most part of little energy and in most instances they dispersed before reaching the Atlantic seaboard. The last area charted was however, of much importance. It was first shewn in the Yukon Territory between the 27th and 28th, and afterwards it spread over the greater portion of the continent, its accompanying cold wave being widely experienced at the close of the month and during the beginning of December.

LOW AREAS.

Eleven areas of low pressure were charted for November, seven first appeared on the British Columbia Coast, two in the Middle Pacific States, one in the South Pacific States and one off the South Atlantic States. The general path of the depressions was across the continent between the 35th and 50th parallels of latitude, thence in many instances over Newfoundland and out to sea. The systems were for the most part not energetic for the late autumn type ; the most pronounced one and the chief exception to the rule was the area which appears to have passed into British Columbia on the 22nd. from the Pacific Ocean. After travelling quickly to the Atlantic coast, it developed rapidly over Long Island and the Connecticut coast, causing a heavy gale of long duration in the Maritime Provinces and in the Gulf of St. Lawrence, which set in late on the 25th and continued until the 28th and even longer in some localities.

WINDS.

In British Columbia, on Vancouver Island and over the Mainland the direction was chiefly easterly to southerly, with two days with strong and nine with fresh breezes and three gales.

In Alberta the direction was variable and the force for the most part light to moderate.

In Saskatchewan the northwest, west and southwest directions predominated, with four days with strong and five with fresh breezes and two gales.

In Manitoba the north and west directions were most in evidence, with eight days with strong and nine with fresh breezes.

In the Lake Region the north and west directions were pronounced with fourteen days with strong and seven with fresh breezes and four gales, the latter occurring between the 1st and 2nd, between the 10th and 11th, on the 23rd and on the 28th.

In the Ottawa and Upper St. Lawrence Valleys the direction was largely between the northwest, west and southwest, with ten days with strong and twelve with fresh breezes and one, or two gales.

In the Lower St. Lawrence Valley and the Gulf the direction was variable, with twelve days with strong and six with fresh breezes and five gales, the gales being experienced on the 5th, between the 7th and 8th, on the 11th, between the 25th and 28th, and on the 30th.

In the Maritime Provinces the direction was variable, with nine days with strong and nine with fresh breezes and three gales, the gales occurring on the 5th, between the 26th and 28th, and on the 30th.

November was not as stormy a month from the Lake Region to the Maritime Provinces as is usually the case. The gales experienced were also for the most part moderate and more or less local, the exception to the rule being the heavy and prolonged storm which occurred between the 25th and 28th in the Gulf of St. Lawrence and in the Maritime Provinces. The warnings issued for this important storm were late, otherwise the storms of the month were warned, but warnings issued to River St. Lawrence and Bay of Chaleur stations on the 2nd, and to Lake Superior on the 3rd, were not justified by subsequent dangerous winds.

TEMPERATURE.

Except in some southern districts of British Columbia and in New Ontario, the mean temperature of November was below the normal from the Pacific to Quebec. Thence eastward the normal was exceeded. The month ended with temperatures below zero in the Western provinces.

The highest and lowest temperatures recorded in each Province during the month of November, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	62° at Agassiz on the 7th	— 6° at Atlin on the 30th.
Alberta,	65° at Lethbridge on the 3rd.	—20° at Peace River Crossing on the 10th.
Saskatchewan,	55° at Prince Albert on the 23rd.	—19° at Cannington Manor on the 28th.
Manitoba,	58° at Almasippi on the 8th.	—20° at Oakbank and Stony Mountain on the 29th.
Ontario,	72° at Pelee Island on the 8th.	— 2° at Uplands on the 20th.
Quebec,	56° at Quebec on the 2nd.	3° at Lake Edward on the 21st.
New Brunswick,	65° at Dalhousie on the 20th.	15° at St. Stephen on the 21st.
Nova Scotia,	62° at Truro on the 5th.	15° at Truro on the 22nd.
P. E. Island,	58° at Charlottetown on the 5th.	22° at Charlottetown on the 22nd.
Newfoundland,	60° at St. Johns on the 5th.	25° at Point Rich on the 25th.

PRECIPITATION.

The amonnt of precipitation of November was in excess of normal over the great part of British Columbia, in Saskatchewan except some districts of the southwest, in Manitoba, in the Gulf and Abitibi regions of Quebec, and locally in the Maritime Provinces.

BRIGHT SUNSHINE.

The amount of bright sunshine registered during the month of November was less than normal throughout the Dominion.

DEPTH OF SNOW ON THE GROUND.

The depth of snow on the ground on the last day of the month was reported as follows :—

Western Provinces —Battleford, 4 inches; Swift Current, 1; Qu'Appelle, 6; Minnedosa, 10; Winnipeg, 5.

Keewatin.—The Pas, 12 inches.

Ontario.—Port Arthur, 5 inches; Emsdale, 12; Gravenhurst, 8; Barrie, 10; Meaford, 12; Southampton, 2; Clinton, 3; Lucknow, 5; Port Stanley, 2; London, 4½; Port Burwell, 1; Toronto, 1½; Uxbridge 10; Kingston, 1.

Quebec.—Montreal, 4 inches; Quebec, 2; Father Point, 12.

New Brunswick.—Chatham, 2 inches.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, NOVEMBER, 1910

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure: Mean reduced.	Pressure: Highest.	Pressure: Lowest.	Pressure: Range.	Temperature: Mean.	Temperature: Difference from average.	Temperature: Years observ'tn	Temperature: Highest.	Temperature: Date.	Temperature: Lowest.	Temperature: Date.	Temperature: Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from: N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind: Mean miles per hour.	Velocity of wind: Highest day's velocity.	Velocity of wind: Date and direction from.	Precipitation: Amount.	Precipitation: Difference from average.	Precipitation: Heaviest fall in month.	Precipitation: Date.	Days with 10c or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
BRITISH COLUMBIA—				in.	in.	in.	in.																																		
Alberni (Beaver Creek)	49	15	124	49	300			37 1	+ 4 0	15	53 0	8	20 0		23 10 1																										
Agassiz	49	14	121	31	52			45 0	+ 3 5	20	62 0	7	28 0		33 21 9																										
Atlin	59	35	133	38	2240	29	93	30	79	29	11	1	68	18 4		5	36 0	13	14	6 0			30	9	5																
Barkerville	53	2	121	35	4180	29	80	30	57	29	01	1	96	24 0		3 7	32 38	12	10	0 0			27	11	5																
Bella Coola	52	10	126	51	150			35 6		1 3	11	18	0	26	0 0					29	8	7																		
Babine Lake	55	38	126	26				25 3			2	13	0	8	7 0					11	11	3																		
Chilcotin (Big Creek)	51	10	123	0	3100			23 3			6	18	0	5	2 0					29	18	7																		
Cranbrook	49	30	115	50																																				
Chayoquot	49	14	125	47	40			41 6		1 1	11	27	0	19	33 0		1 8	11	8																				
Cowichan (Tzouhalem)	48	25	123	42	170			43 3			4	57	1	4	30 0		15	11	2																				
Chilliwack	49	10	121	57	21			41 3			9	51	0	11	27 0		25	9	4																				
Enderby	50	32	119	7	1180			31 9			5	50	0	6 7	20	23	24	11	6																				
Fairview	49	11	119	36				35 7			2	18	0		25 0		17	1	0																				
Fruitvale	49	9	117	31				31 3			1	51	0	7	16 0		25	10	1																				
Glacier	51	14	117	29	4072			25 3			9	35	0	6 15	4 0	25	26	9	6																				
Golden	51	16	116	55	2500			28 6			9	16	0		10 0		26	10	6																				
Holberg	50	39	128	18				40 9			2	52	0	12 7	31 2		28	9	9																				
Hedley	49	35	120	10				37 6			7	56	0	4	18 0		24	16	7																				
Hedley (Nickel Plate)								32 1			7	12	0	1	0 0	25	26	16	6																				
Hope	49	23	121	25				38 1			1	50	0	12	26 0		25	8	3																				
Ikeda Bay	52	17	131	7	0			40 3			3	57	0	16	34 0	15	24	12	2																				
Kamloops	50	41	120	29	1215	29	80	30	10	29	30	1	10	37 5		2 5	20 56	5	2	32 5			26	11	5		85	7	13	3	3	23	7	12	1	1	0	7	60	4 0	16 0	7 8	0 65	0 47	0 18	14	15	1	0	0
Ladner	49	5	123	4				43 1			0 4	10	59	0	0					29 0	21	26	12	5																		
Massett, Q.C.I.	53	58	132	9	30			39 1			1 7	13	50	0	22	23 0		11	1	9																				
aNanaimo	49	10	123	57	125	29	83	30	16	29	19	0	97	42 1		0 4	10 55	0	5	29 2			25	10	2		90	8	12	0	0	0	15	2	6	2	6	29	60	5 0	20 0	9 8	8 4	0 25	1 22	3	0	0
Nicola Lake	50	9	120	39	2120			35 1		2 8	15	51	0	5 7	18 0		27	12	1																				
North Nicomen	49	12	122	2	50			42 2		0 7	17	54	0	7 11	26 0		24	10	1																				
New Westminster	49	13	122	54	330	29	91	30	30	29	10	0	91	42 1		1 1	23 51	9	2	27 8			25	8	3		95	8	16	0	3	27	1	4	1	1	2	18	60	4 4	20 0	7 8	10 95	2 00	2 05	22	8	0	0	1
Needles	49	0	118	6				39 1			2	53	0	8	27 0		21	9	7																				
Nelson	49	29	117	21	1760																																			
Okanagan Mission (Kelowna)	49	52	119	29	1200			36 1		0 7	11	53	0	7	23 0		28	10	9																				
Princeton	49	29	120	29	1650			42 1		0 7	15	49	0	6	11 0		25	11	6																				
Penticton	49	28	119	35																																				
Pemberton Hatchery	50	20	122	33				36 1			3	50	0	2	26 0		7	3																				
Prince Rupert	54	18	130	18	170	29	73	30	16	28	30	1	17	38 9			1	18	0	1	17 0		29	8	6		97	8	17	6	11	15	7	2	1	0	0	18	60	5 8	22 0	—	9 17		1 24	21	0	0	0	1
Quesnelle	52	59	122	30	1700			29 4		2 3	15	51	0	8	5 0		20	15	2																				
Revelstoke	51	0	118	6	1476			33 5		1 6	11	49	0	8	18 0		25	7	6																				
Rossland	49	5	117	18	3100			32 8			7	18	7	3	17 0		26	6	4																				
Ruskin (Stave Falls)	49	16	122	23	125			43 5			1	55	0	1 29	29 0		25	11	9																				
Stuart's Lake (Fort St. James)	54	28	124	12	2280			25 9	+ 2 3	17	47	4	7		2 0		9	18	5																				
Salmon Arm	50	42	119	35	1152			35 7			9	53	0	7	25 0		21	9	0																				
Steveston (Garry Point)	49	21	123	17				42 2		0 3	15	53	0	7	28 0		25	10	5																				
Swanson Bay	50	37	126	53				38 0			3	49	0	1 22	24 0	27	28	8	4																				
Salt Spring Island	48	50	123	20				42 3			2	58	5	6	29 0		26	9	5																				
Summerland	49	37	119	0	1100			35 8			1	54	0	7	22 0		24	10	6																				
Stewart	56	1	130	1	215			29 9			1	38	0	1 5	9 0		30	7	1																				
Sooke	48	11	123	44				43 8			1	55	0	6	29 0		25	12	6																				
Tobacco Plains (Elko)	49	1	115	5	2681			37 1	+ 3 7	15	55	1	1		2 0		27	10	8																				
aTranquille	50	41	120	29		28	68	29	12	27	92	1	13	38 0			3	61	0	6	22 0		24	12	1		79	8	14	5	7	6	17	2	5	0	3	15	60				0 31		0 15	7	23	0	0	0
Triangle Island	50	52	129	5	680	29	80	30	23	28	92	1	31	39 0			1	48	0	1	30 0		28	4	5		95		24	0	9	2	23	0	18	2	6	0	60	25 6	80 0	20 84	15 93		2 46	26	4	0	2	7
Vernon (Coldstream Ranch)	50	14	119	15	1216			35 9	+ 1 8	16	56	0	6		23 0		25	10	1																				
Victoria	48	24	123	19	85	29	92	30	26	29	25	1	01	41 0		1 8	18 54	8	1	33 3			26	8	4		89	8	9	18	10	6	6	3	7	5	1	4	60	8 2	40 0	22 86	7 71	1 61	1 79	20	10	0	0	0
Vancouver	49	17	123	5	130	29	96	30	28	29	37	0	91	42 8	+ 0 4	10	52	9	2	30 7			24	7	4		91	8	16	0	1	16	17	1	6	6	1	0	60	3 9	15 0	20 8	10 62		1 87	23	7	0	0	0
Winter Harbour	50	32	128	3				42 2		0 9	11	56	0	9	29 0		26	8	5																				
Wilmer	50	31	116	14				28 1			2	46	0	7	11 0	13	27	11	2																				

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, NOVEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure: Mean reduced.	Pressure: Highest.	Pressure: Lowest.	Pressure: Range.	Temperature: Mean.	Temperature: Difference from average.	Temperature: Years observed.	Temperature: Highest.	Temperature: Date.	Temperature: Lowest.	Temperature: Date.	Temperature: Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from: N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind: Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation: Amount	Difference from average.	Heaviest fall in month.	Time with 0.01 or more	Number of fair days.	Number of cloudy days.	Number of days on which snow fell.
				in.	in.	in.	in.																																
SASKATCHEWAN—*Con.*																																							
Swift Current	50	107	15	2430	30·06	30·79	29·39	1·40	23·2	3·5	21	48·0	6	1·0	30	13·3		81		6	0	2	5	13	7	23	16	18	90				0·32	0·24	0·11	5	25	0	0	1
Saskatoon	52	106	30	1571					17·5		9	38·8	23	12·5	29	15·3																	0·15		0·15	3	27			4
Strassburg	51	104	56						17·6		1	42·0	1	5 —	10	0	29	17·3															0·30		0·30	1	29	0	0	0
Scott (Hearts Hill	51	109	30																																				
The Pas	53	101	15	890	30·10	30·59	29·53	1·06	13·9	—	1	27·0	12	— 2·5	10	8·9				1	2	12	0	0	0	37	1	1	60				2·13		0·70	10	20	0	1	0
Waseca	53	109	29						15·5	—	2	36·0	12	10·0	29	15·2				2	2	6	9	1	2	4	7	0	30				0·20		0·10	3	27	2	0	0
Yorkton	51	102	29																																				
MANITOBA—																																							
Almasippi	49	98	20						19·9	—	8	58·0	8	— 10·0	29	16·2																	1·16		0·70	3	27	0	1	0
a Aweme (St. Alban's)	49	99	33	1180					18·7	3·5	26	52·0	8	7·5	29	16·4																	1·76	1·01	0·93	9	20	1	0	0
Brandon	49	99	57	1176					18·3	0·8	23	51·8	8	14·1	29	17·5																	2·10	1·20	1·20	3	25	1	0	0
Birtle	50	101	1	1703																																			
Berens River	52	97	23	710					17·8	—	2	30·0	1	— 5·0	15	30	11	3		15	2	19	0	8	2	7	7	0	60				2·00	—	0·60	8	22	0	0	1
Carberry	49	99	20	1258						—	6	—	—	—																			1·80		1·20	2	28	0	2	0
Carman	49	98	0	872																																			
Cypress River	49	99	3	1232																																			
Hillview	49	100	33	1100					17·3	2·5	25	50·0	8	15·0	29	11·4		6	7	3	8	10	8	1	5	11	12	2	90				1·88	0·62	0·61	6	20	1	0	1
Minnedosa	50	99	50	1620	30·07	30·62	29·43	1·19	17·0	1·1	27	52·8	12	7·7	18	11·2		5	8	2	1	2	3	1	0	12	11	28	60				1·52	0·50	0·76	11	19	2	0	0
Morden	49	98	6	978					20·7		7	51·5	8	5·0	28	15·5																	1·05		0·65	7	23	0	0	0
Moose Horn Bay (Atikenseville)	51	99	33						17·5		1	30·0	1	0·5	18	12·9				22	3	8	1	5	1	1	8	5	60				1·26		0·65	7	23	2	0	1
Ninga	49	99	51	1649					17·0		11	55·6	8	11·0	29	16·1																	1·14		0·70	6	24	0	0	0
Oakbank	49	96	42	800					18·8	— 0·5	14	57·3	8	20·0	29	11·8				6	2	0	0	1	1	8	9	0	30				1·20	0·51	0·50	7	25	0	0	0
Pipestone	49	100	58	1100																																			
Portage la Prairie	49	98	17	850					18·8	1·1	16	41·0	8	— 9·0	30	11·6																	1·55	0·97	1·10	7	25	0	0	0
Portage la Prairie (2)	49	98	17																																				
Pierson	49	101	5	1531																																			
Stony Mountain	50	97	11	803					17·6	— 3·1	29	58·0	9	20·0	29	17·9				5	2	3	7	6	7	7	23	0	60	2·1	4	1 + 3 +	0·43	2·17	0·90	2	28	0	0	1
Swan River	52	101	15	1112					17·3		3	31·0	22	6·0	29	12·5																	0·75		0·30	4	26	0	0	0
Treherne	49	98	40	1212					18·5	3·1	15	51·0	8	5·0	30	12·7																	1·06		0·60	6	24	2	0	1
Virden	49	100	55	1111																																			
Winnipeg	49	97	7	760	30·08	30·63	29·52	1·11	19·9	— 1·6	35	58·0	8	— 8·7	29	12·1		7	7	3	3	8	2	5	1	11	19	3	60				1·25	— 0·19	0·42	9	21	0	0	0
ONTARIO—																																							
Alton	43	80	5	1250					29·0	2·1	24	57·2	2	15·8	32	14·5																	2·61	— 0·24	1·20	11	19	0	0	1
Aurora	43	79	24	886					31·9		3	55·5	1	21·2	5	9·9																	3·33	—	1·63	11	19	0	0	0
Agincourt	43	79	16	580					31·2	1·0	14	58·3	1	21·7	16	9·5				5	4	13	1	2	3	23	31	1	80				2·40	— 0·45	0·84	10	11	0	0	2
Barrie	44	79	41	810					31·3	2·6	32	54·0	1	19·0	19	8·5		9	9	20	6	1	9	1	12	7	19	9	90	11		IV	5·11	+2·05	1·03	17	13	0	0	0
Beatrice	45	79	20	800					30·2	0·7	35	55·0	2	11·0	18	20	11	5	9	20	9	0	1	9	5	1	4	32	20	90	1		III	2·87	0·81	0·80	10	20	0	0	0
Bruce Mines	46	83	55	595					31·5	1·8	42	46·0	1	18·0		11	10	6															3·62	2·04	0·89	11	19	0	0	0
Birnam	43	81	57	620					31·3	2·6	27	59·2	1	20·5	29	7·7				1	2	6	2	9	3	17	16	1	60				3·16	0·67	0·82	13	17	0	0	0
Brantford	43	80	21	750					33·7	2·5	28	60·0	1	12·0	20	10·7																	2·07	0·68	0·65	8	22	0	0	0
Bloomfield	43	77	21	260					32·1	3·6	41	57·0	2	16·0	22	10·1																	2·34		1·35	8	22	0	0	0
Bancroft	45	77	50						28·8	2·0	21	51·0	1	6·0	19	12·2																								
Copper Cliff	46	80	20							3·4	19	0·0	2	13·0	19																		2·12		0·83	7	23	0	0	0
Clinton	43	81	37						32·8		8	57·0	6	18·0	8	8·8				5	4	1	3	8	3	8	25	0	60				3·10		0·95	20	10	0	0	0
Coldwater	44	79	40	1100					30·1	3·5	23	60·0	2	12·0	19	15·2																	2·28	0·12	0·80	10	22	0	0	0
Cottam	42	82	45	606					33·2	5·2	23	69·0	3	18·0	21	16·6				33	2	1	3	5	10	3	3	0	60				2·86	— 0·69	0·95	11	19	0	0	0
Chatham	42	82	12	595					21·9	3·6	21	62·0	1	19·0	20	12·3																	1·68	— 1·20	0·51	5	25	0	0	0
Cochrane	49	81	0	930																																			
Collingwood	44	80	2						—	—	16	60·0	1	23·0	20	—																	0·80		0·40	14	15	0	0	0
East Toronto	43	79	18						31·9	—	5	55·0	1	21·0	5	11·7																	1·26		0·77	9	21	0	1	0
Elora	43	80	24	1271					32·0	1·1	14	58·0	2	3	19	0	22	12·3															2·34	0·89	0·76	13	18	0	0	0
Gravenhurst	44	79	20	770					30·7	0·6	30	53·0	1	2	16	0	19	10·4		8	11	26	7	10	13	2	3	8	17	4	90	2·5		3·7	2·26	— 0·41	0·57	11	16	1	0	0
Guelph	43	80	16	1050					32·5	2·2	24	57·0	1	21·0		7·8	9																3·24	+0·98	1·31	10	20	0	1	0
Grimsby	43	79	36	282					36·1		1	62·0	2	3	22	0	21	22·12·1															3·79		2·30	9	21	0	0	0

ONTARIO—*Concluded.*

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, NOVEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observ'n	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with '01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms	No. of fogs.
NEW BRUNSWICK—	°	′	°	′																																				
Bathurst	47	39	65	12	15															1	9	18	2	1	13	15	3	0	62				1 03	+0 21	0 71	16	11	0	0	0
Chatham	47	3	65	29	21	29 71	30 11	28 97	1 14	35 6	+ 2 8	26	53 5	12	19 5	22	22	9 3		1	2	8	1	1	2	11	0	1	30				2 33	— 0 40	1 69	1	25	0	0	0
Dalhousie	48	4	66	22	30					33 9	+ 0 5	38	51 6		16 0	22	11	3	89	7	12	8	21	4	4	1	8	21	21	2	90	S 1	19 0	17 W	2 58	— 1 74	1 08	9	21	0	0	2
Fredericton	45	57	66	38	161	29 71	30 10	29 17	1 23	39 4	+ 0 8	25	63 0		27 0	30	10	4		3	9	6	6	3	10	18	10	2	67				2 52	— 3 68	0 85	12	18	0	0	4
Grand Manan	44	47	66	46	89	29 73	30 39	29 22	1 17	39 4	+ 2 0	13	57 0		17 0	21	11	1		0	8	1	2	0	1	3	11	2	30				3 01	+ 0 41	0 90	10	20	0	0	3
Moncton	46	9	64	45	50					35 8	+ 2 0	13	57 0		17 0	21	11	1		0	8	1	2	0	1	3	11	2	29				2 68	— 0 46	0 73	6	21	0	0	1
*Point Lepreaux	45	1	66	28	30					38 2	+ 0 6	32	53 0		27 0	19	21			13	8	18	7	2	6	8	3	24	6	78	11	V	17 S W	2 68	— 0 46	0 73	6	21	0	0	1
St. John	45	17	66	4	70	29 71	30 38	29 21	1 17	37 6	+ 0 9	36	51 5		25 5	21	8	7		7	10	3	23	3	2	1	6	5	11	5	60				2 24	— 2 46	0 51	9	21	0	0	0
St. Stephen	45	11	67	16	35					34 8	+ 0 6	13	53 0		15 0	21	13	9															2 41	— 0 36	1 03	6	21	0	0	0
Sussex	45	38	65	38	69					35 0	+ 0 9	13	56 0	4-6	20 0	1-19	13	1		0	7	3	1	0	4	1	0	14	30				1 88	— 0 85	1 49	1	26	0	0	0
NOVA SCOTIA—																																									
Halifax	44	39	63	35	88	29 68	30 11	29 18	1 23	39 8	— 0 1	35	57 3		22 3	22	11	2				8	15	5	5	1	5	8	13	0	60				5 23	— 0 67	1 79	14	16	0	0	1
Port Hastings	45	39	61	32	15																																			
Parrsboro	45	23	64	19	10					38 1	+ 1 7	11	60 0		5	19 0	21	12	5																		0	0	0
Sydney	46	10	60	10	35	29 70	30 11	29 11	1 30	41 0	+ 2 1	37	60 0		5	28 0	11	8	9	9	18	2	15	1	4	1	8	7	13	6	60				5 90	— 0 46	1 46	18	12	0	0	0
*Sable Island, E. Point	43	58	59	46	115																																			
Truro	45	22	63	18	90					38 5	+ 2 5	35	62 3		5	15 2	22	13	1	8	11	1	19	5	8	1	21	6	11	12	90				3 19	— 1 66	0 81	21	18	0	1	0
Windsor	44	59	64	6	30					37 1		8	61 0	6	19 0	13	22	13	8															3 45	— 1 18	1 16	16	0	0	0
*Whitehead	45	15	61	8	30					40 8	+ 1 3	27	53 0	5-7	32 0		22					10	16	19	6	3	1	20	9	1	10				5 46	— 1 07	1 36	7	23	0	0	3
aWolfville	45	7	64	20		29 61	30 37	29 11	1 26	38 2	+ 0 8	10	61 7	5	32 1		22	10	0			4	11	4	5	2	13	7	15	60				3 51	— 0 31	1 12	11	19	0	0	3
Yarmouth	43	50	66	2	65	29 70	30 39	29 26	1 13	40 2	0 0	30	61 1	5	25 2		24	10	6			10	7	11	3	5	1	4	13	0	60				2 71	— 2 27	0 92	17	13	0	0	1
P. E. ISLAND—																																									
Charlottetown	46	14	63	10	38	29 70	30 12	29 11	1 31	38 2	— 2 2	35	58 0	5	23 0		22	8	1			1	15	7	5	3	6	13	3	1	60				1 47	— 0 07	0 86	19	11	0	0	0
Charlottetown (2)	46	13	63	10	75					37 9	—		1 56	5		5	12	0																1 89	—	0 92	20	10	0	0	0
NEWFOUNDLAND—																																								
*Amour Point	51	28	56	51																																				
Burin	47	0	55	10	27	29 70	30 16	29 19	1 27	44 6			2 51	6	13		29	0	25	9	5													5 21		1 28	21	9	0	1	4
*Cape Norman	51	38	55	52						33 0	+ 1 0	29	40 0	11	16		29	0	30			15	30	18	6	4	1	7	6	0	90				5 20		1 24	11	19	0	0	12
Fogo	49	43	54	17	30	29 71	30 53	28 99	1 51	38 7			1 51		5		29	0	24	6	4													5 63		0 26	24	6	1	0	6
*Point Rich	50	42	57	25	35					36 2	+ 1 1	26	57 0		4		25	0	25			9	12	31	3	2	1	16	6	1	90				5 15	— 0 64	1 00	15	15	0	0	0
Port aux Basques	47	35	59	10	27	29 68	30 43	29 09	1 34	39 4			2 53	5	1		25	5	23	7	3		1	2	4	13	1	0	61				5 49		1 11	23	7	0	0	2
St. John's	47	30	52	12	125	29 61	30 31	29 04	1 30	43 0	+ 5 1	36	60 0		5	30 0	17	8	8			8	17	7	14	12	6	5	9	3	3	1	60				10 15	— 1 75	1 36	34	0	0	0	7
BERMUDA—																																									
Prospect	32	17	64	30	151	29 91	30 18	29 61	0 51	65 5	— 2 7	19	75 2		4	49 1		27	9 5			1	7	0	2	8	6	18	13	2	60				3 30	— 1 17	0 86	19	11	0	2	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING NOVEMBER, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
	in.			in.		in.		in.		
British Columbia—										
Alberni										
Annis	2·21	11	16	0·36	20	0·8	2	0·7	26	
Beaver Lake	8·80	16	14	2·18	20	0·5	1	0·5	25	
Coquitlam	13·18	11	19	2·50	20	1·3	1	1·3	27	
Denman's Island	12·74	17	13	1·72	10					
Ferguson	2·07	4	26	1·08	7	52·0	11	9·0	10-21	
Goldstream Lake	15·81	23	7	3·06	20	5·0	2	3·0	27	
Grand Forks	1·05	9	21	0·45	19	1·0	5	1·8	17	Thunder and hail on 21.
Hornby Island										
Jordan River	16·50	21	9	3·62	20					
LittleQualicum(French Creek, V.I.)	8·06	11	16	1·15	11	T				
Monte Creek	0·74	5	25	0·29	1					
Naas Harbour	5·13	13	17	1·06	13	11·0	2	6·5	10	
Sooke										
Skidgate	9·89	17	13	1·16	13	1·7	1	1·7	7	
Alberta—										
Bardo						3·0	4	1·0	3-7	
Bismark						1·1	5	2·0	19	
Bruederheim										
Bittern Lake						6·0	7	1·8	7-19	
Bantry										
Brooks						6·2	5	2·5	19	
Conjuring Creek						3·8	5	1·0	3-7	
Coutts						4·0	4	1·0	18-27	
Campsie						6·1	8	2·1	7	
Caldwell	0·34	5	25	0·10	8-10	8·0	3	6·0	25	
Dorenlee						6·0	5	2·0	7-26	
Elkwater										
Grassy Lake						2·5	2	2·0	18	
Jumping Pound	0·23	5	25	0·11	19					
Kimball										
Lacombe						1·5	3	2·0	21	
Langdon										
Loch Sloy	1·81	5				18·1	5	12·0	26	Fog on 9, 10, 11.
Lyndon						4·2	4	2·0	26	
Macleod	0·18	2	28	0·10	21	9·5	7	1·0	24	
Okotoks						1·8	2	1·0	29	
Ponoka						7·5	2	4·0	6	
Sion						11·0	8	2·5	7-8	Aurora on 2, 3, 4, 5, 11, 29.
Wabamun										
Saskatchewan—										
Carmichael						7·8	2	4·3	26	
Elm How						8·0	7	2·0	1-26	
Gull Lake						1·5	3	2·0	19-26	
Hanley										
Last Mountain										
Maple Creek						1·8	7	1·0	10-19-20	
Kindersley	0·06	1	25	0·06	11	1·7	4	1·0	18	
Manitoba—										
Cartwright	R	—	—	R	21	15·4	1	9·0	26	Aurora on 30.
Deloraine						11·8	4	5·0	26	Aurora on 17th
Gretna	0·15	1	29	0·15	8	8·8	1	3·0	25	
Norquay						9·0	5	2·5	26-27	
Rapid City						11·0	5	6·3	26	Fog on 16, 18.
Ontario—										
Arden	1·34	10	20	0·48	11	7·0	5	2·0	12-29	Fog on 1, 3, 24.
Deer Park	1·78	5	25	0·96	10	2·8	2	1·8	28	
Dutton	1·50	4	26	0·50	9	1·0	2	0·5	13-15	
Emsdale	0·77	1	26	0·43	2	18·5	10	6·0	11	
Ennismore										
Goderich										
Georgetown	1·72	12	18	0·92	10	3·7	4	1·5	8	Thunder on 10th.
Grantham	1·49	10	20	0·41	29	2·8	1	2·8	8	
Grand Valley	0·61	3	27	0·31	2	15·0	11	3·0	29	
MacCne	0·64	3	27	0·40	10	1·0	1	1·0	29	
Orangeville	1·23	2	28	0·99	10	13·9	10	2·6	29	
Princeton	2·09	3	27	1·41	10	4·0	4	2·0	8	
Sydenham	1·50	3	27	0·85	10	8·0	3	6·0	29	
Strathroy	1·56	4	26	0·56	10	21·5	6	6·0	12-29-30	
Watford	2·77	5	25	1·00	10					
Westport	0·93	2	28	0·61	10	12·4	7	3.0	7	
Wooler	2·03	3	27	1·45	10	3·0	1	3.0	29	
Westminster	2·85	3	27	1·32	10	30·0	4	18·0	16	
Wiarton	2·43	6	24	0·82	10	20·3	8	5·0	10	
Wesley	0·99	3	27	0·53	11	18·0	15	2·0	6-25-30	
Quebec—										
Timiskaming	0·26	1	29	0·26	1	17·1	8	6·0	10	
Kepawa						26·0	12	1·0	10-11	
New Brunswick—										
Point Escuminac	2·81	7	23	0·98	28	0·2	1	0·2	16	Fog on 3, 4, 5, 6.

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF NOVEMBER 1909.

STATIONS.	Hours Ending																							
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Mid.
Victoria								T	13	20	25	27	25	25	13	05								
Nanaimo									01	02	20	21	23	18	15	13	02							
Vancouver									07	15	21	22	20	21	22	18	05							
Agassiz									02	18	23	21	20	17	20	08								
Tranquille									04	11	17	22	25	22	20	20	03							
Summerland								00	13	21	31	26	21	25	20	04								
Kamloops									11	18	20	20	30	22	19	03								
Edmonton									05	12	16	23	28	25	23	16	01							
Lethbridge								03	28	42	45	56	60	55	50	49	12							
Lacombe									01	12	15	23	25	20	35	28	01							
Fort Vermilion									01	12	25	24	33	32	25	01								
Battleford								03	08	19	21	23	23	20	10	15	01							
Indian Head								02	12	17	26	26	26	25	11	03	01							
Moosejaw								02	10	20	29	31	34	29	29	19	03							
Dunvegan									02	12	15	24	20	37	33	05								
Brandon							02	11	23	30	35	43	43	48	33	T								
Winnipeg									07	13	20	25	27	27	29	23	10							
Haileybury								01	03	05	06	05	10	11	12	12	03							
Woodstock								01	11	21	21	17	22	18	10	06	01							
Lindsay									05	18	20	26	20	15	19	06								
Barrie								01	05	16	22	17	17	17	11	07								
Toronto								02	13	19	22	28	26	27	17	13	05							
Kingston							02	05	11	14	16	13	19	18	20	13	03							
Ottawa								01	13	16	25	28	21	18	17	11	02							
Montreal										10	21	32	31	29	16	08	01							
Quebec								02	12	19	23	29	25	20	25	21	01							
Sherbrooke								01	10	15	17	19	10	07	13	01								
Fredericton								12	28	31	36	34	32	33	31	26	08							
Charlottetown								01	21	22	23	29	30	28	21	21	10							

	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Medicine Hat.	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw	Dunvegan.	Brandon.	Winnipeg.	Haileybury.	Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottetown.
Registered duration in hours.	45	35	50	38	43	51	46	45	120	52		47	44	46	61	47	81	54	20	39	30	35	52	40	47	46	57	29	81	61
Percentage of possible duration	17	13	18	14	16	19	17	17	44	20		20	17	17	23	19	30	20	7	14	13	12	18	14	16	19	20	10	29	23
Difference from average	– 2		–	– 1		—							– 11	– 8	–		3	– 15	—	12	12	8	10	3	– 13	– 10	—		– 3	–
Maximum percentage in one day	63	49	73	71	87	80	71	85	93	80		72	91	70	81	81	83	93	91	86	62	77	87	92	93	67	93	81	95	87
Date of maximum	23	23	15	23	21	24	21	16	15	29		13	22	6	18	9	23	23	9	1	3	1	1	29	27	20	20	1	18	1
No. of days completely clouded	11	15	11	18	16	15	15	18	3	13		17	12	12	12	13	10	17	19	13	17	10	12	17	14	13	12	19	15	16

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Hillsdown, IV ; Waitefield, IV ; Muenster, I ; Fort Vermilion.
2. Sion, IV.
3. Sion, IV.
4. Halkirk, Sion, IV ; Haileybury, IV ; Gravenhurst, IV.
5. Aweme, III ; Hillview, IV ; Waitefield, IV ; Sion, IV ; Waseca ; Dawson, IV.
6. Esterhazy, IV.
7. Schreiber, IV ; Lake Talon, IV.
8. Waitefield, IV ; Dawson, IV.
9. Aweme, II ; Waitefield, II ; Waseca, Esterhazy, II ; Aitkenville, III ; Fort Vermilion ; Dawson, IV.
10. Muenster, II.
11. Sion, IV.
14. Fort Vermilion, Dawson, IV.
15. Waitefield, IV ; Fort Vermilion.
16. Fogo, IV.
17. Deloraine (very bright.)
19. Waitefield, III.
20. Quebec, IV ; Dawson, IV.
22. Fort Vermilion.
23. Treherne, IV ; Brandon, Waitefield, IV ; Chaplin, II ; Fort Vermilion.
25. Esterhazy, III ; Aitkensville, III.
28. Aitkensville, IV ; Dawson, IV.
29. Aweme, III ; Hillsdown, IV; Sion, IV ; Chaplin, IV ; Aitkensville, IV ; Minnedosa, IV.
30. Treherne, IV ; Aweme, III ; Cartwright, IV ; Crescent Lake, IV ; Melfort, IV ; Esterhazy, IV ; Aitkensville, III ; Minnedosa, III.

Thunder recorded :

3. Berens River.
7. Berens River.
10. East Toronto, Brantford, Dutton, Georgetown, London.
17. Burin.
21. Berens River.
23. Berens River.
25. Bermuda.
26. Bermuda.

FORECASTS FOR NOVEMBER, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1226. These were divided as follows :—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Per centage.
Alberta	78	53	16	9	78·2
Saskatchewan	80	52	22	6	78·7
Manitoba	82	63	11	5	85·4
Lake Superior	111	77	28	9	79·8
Georgian Bay	117	95	20	2	89·7
Lower Lakes	117	91	19	4	88·0
Ottawa Valley	101	72	21	11	79·3
Upper St. Lawrence	101	77	22	5	84·6
Lower St. Lawrence	105	71	23	8	81·1
Gulf	105	72	28	5	84·9
Maritime Provinces West	113	74	30	9	78·8
Maritime Provinces East	107	69	29	9	77·6
Total	1226	872	272	82	82·2

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
January, 1911.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXIV. DECEMBER, 1910. No. 12.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the data used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

GENERAL SYNOPSIS.

The weather of the month of December was colder than the average of the preceding twenty-five years in Alberta, Saskatchewan, Manitoba, Ontario, Quebec and a great part of the Maritime Provinces. In many portions of the Dominion there was very little precipitation and much bright sunshine.

In British Columbia the weather was wet or snowy, according to locality, but was not colder than the normal as in other provinces, for, on the contrary, the twenty-five year average was exceeded in the central and northern districts of Vancouver Island by about 1°, on the lower mainland by from 2° to 4°, and on the northern coast from 3° to 6°; while in southern Vancouver Island and the Barkerville-Quesnelle district the temperature was practically normal.

The weather of southern Alberta during December partook largely of the character of that which prevailed in British Columbia, the temperature exceeding the normal by from 2° to 3°. In the central and northern districts, however, the mean temperature of the month was lower than in the average December by about 2°. The snowfall was very scanty throughout the province.

Several severe cold waves moved during the month from the Yukon across Saskatchewan and Manitoba, causing much more than average cold in eastern Saskatchewan and western Manitoba. The first cold wave occurred during the first week, causing temperatures below zero in both provinces. A milder period then intervened till the 10th, when another extensive area of high pressure from the north dominated the weather till the 12th in Saskatchewan and the 13th in Manitoba. Southerly winds then set in for an interval, with much higher temperature, and the weather continued moderately cold till the 27th, which was a severely cold day, especially in Manitoba. Low temperatures persisted till the 30th, when snowfalls occurred, accompanying a mild period, which lasted a few hours only, severe cold establishing itself again on the last day of the month. The snowfall during the month was quite heavy, amounting to from 9 to 15 inches, falling on from 2 to 7 days only, in Saskatchewan, but on from 6 to 15 days in Manitoba.

Rarely has such cold weather been experienced in Ontario in December as occurred in this month of 1910. The mean temperature of the month at Toronto was 21°. The years 1859, 1871, 1872, 1876 showed the same month with temperatures from 1° to 4° colder, and in the years 1845, 1851, 1854, 1867 and 1880, December had much the same temperature as in 1910. The provinces of Ontario and Quebec were under the influence of severe cold waves during the greater part of the month, owing to the passage eastward of several energetic areas of high pressure. Such conditions obtained from the 2nd to the 6th, from the 8th to 13th, 15th to 17th, 24th to 26th, and on the 30th and 31st. The mean temperature was from 5° to 7° below the normal in Ontario, and in Quebec beyond Quebec city, while in the Gulf districts of Quebec the weather was not severe. The amount of precipitation was very small in both provinces.

The weather in December in northern New Brunswick was similar to that which obtained in the Gulf districts of Quebec, but in the remainder of the Maritime Provinces the mean temperature was from 1° to 2° colder than the normal. The precipitation was in excess of average except in northern New Brunswick and the extreme southwest of Nova Scotia, and locally on Prince Edward Island.

In Newfoundland the mean temperature was about 1° warmer than normal, while the precipitation appeared to be in excess on the eastern coast and deficient on the western.

The mean daily temperature of Bermuda was 4° lower than the average of the preceding 20 years, and the rainfall was also deficient.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure of the month of December was considerably above normal in the Yukon, slightly above in Vancouver Island and the lower mainland of British Columbia, and also in the western provinces and Ontario as far east as the Ottawa Valley. Thence eastward it was below. There was also a slight deficiency in the mountain districts of British Columbia and southern Alberta. The extremes of difference from normal were +0·38 inch at Dawson and —0·15 at St. John's, Nfld.

HIGH AREAS.

Areas of high pressure were of frequent occurrence during the month, no less than twelve well defined systems being charted. Five first appeared in the Yukon Territory, one in the interior of British Columbia, one in Northern Saskatchewan and five on the United States Pacific coast. Three of the areas after reaching the Great Lakes became unimportant or dispersed ; two others united over the Great Lakes, whence the system passed to the Maritime Provinces and Newfoundland ; the remainder drew southward to the Gulf or Southern States, where some broke up and others passed out into the Atlantic Ocean.

LOW AREAS.

During the month fourteen areas of low pressure appeared on the continent. Ten appeared either on the Northern British Columbia or the Alaskan Coasts, two in the South Pacific States, one in Texas and one over the New England States. Five of the areas passed well to the northward of the Great Lakes, four over and four well to the southward of the Great Lakes, their subsequent course being usually into the Gulf of St. Lawrence and across Newfoundland. The systems were frequently of much energy, especially as they approached our Maritime coasts and Newfoundland, where their accompanying gales were more generally and severely felt than over the interior of the continent.

WINDS.

In British Columbia on Vancouver Island and over the Mainland the south and east directions predominated with frequent fresh breezes but with few strong winds or gales.

In Alberta the direction favoured slightly the south and west, the force being usually light or moderate.

In Saskatchewan the northwest and southwest directions chiefly prevailed, with nine days with strong and nine with fresh breezes and one gale.

In Manitoba the north and west directions were most in evidence, with nine days with strong and eleven with fresh breezes and one gale.

In the Lake Region the direction was more or less variable, with thirteen days with strong and eleven with fresh breezes and two gales.

In the Ottawa and Upper St. Lawrence Valleys the north and west directions obtained the most frequently, with eight days with strong and fifteen with fresh breezes and two gales.

In the Lower St. Lawrence Valley and the Gulf the direction was mainly north and west, with eight days with strong and twelve with fresh breezes and four gales.

In the Maritime Provinces the north and west directions also largely prevailed with eight days with strong and thirteen with fresh breezes and five gales.

Navigation for the season was practically over by the beginning of the month on the Great Lakes and in the St. Lawrence Valley; but in the Maritime Provinces where it continues in most localities without interruption during the year, the five gales which were experienced occurred on the 7th, the 16th, the 19th, between the 24th and 25th, and between the 30th and 31st. They were nearly all of considerable force and in each instance warnings were duly issued before their approach.

TEMPERATURE.

The mean daily temperature of British Columbia was higher than the average from 1° to 4° over the lower mainland and Vancouver Island and from 2° to 6° on the northern coast. In southern

Alberta the normal temperature was exceeded by 2° to 3°, while in northern Alberta, Saskatchewan and Manitoba it was not reached by from 2° to 6°. In Ontario, and Quebec as far east as Father Point, low temperatures also prevailed, the mean falling 4° to 7° below the normal. In the Gulf districts of Quebec, northern New Brunswick and Newfoundland the normal was exceeded, while in southern New Brunswick, Nova Scotia and Prince Edward Island there was a deficiency of 1° to 2°.

The highest and lowest temperatures recorded in each Province during the month of December, 1910, were:

	HIGHEST.	LOWEST.
British Columbia,	67° at Ruskin on the 10th	—36° at Fort St. John on the 29th.
Alberta,	63° at Loveland on the 7th.	—48° at Fort Vermilion on the 29th.
Saskatchewan,	52° at Battleford on the 20th.	—42° at Le Pas on the 30th.
Manitoba,	57° at Dauphin on the 14th.	—45° at Moose Horn Bay on the 30th.
Ontario,	46° at Lakefield on the 1st, and at Schreiber on the 23rd.	—41° at Kakabeka Falls on the 30th.
Quebec,	40° at Cape Chatte and Cape Magdalene on the 24th.	—35° at Abitibi on the 21st and Lake Edward on the 31st.
New Brunswick,	55° at Grand Manan on the 24th.	—20° at St. Stephen on the 18th.
Nova Scotia,	55° at Wolfville on the 30th.	— 8° at Antigonish on the 19th.
P. E. Island,	47° at Charlottetown on the 25th.	—1° at Charlottetown on the 19th.

PRECIPITATION.

The precipitation of December was generally well in excess of normal in British Columbia, Saskatchewan and Manitoba, and in the Maritime Provinces with the exception of northern New Brunswick and the extreme southwest of Nova Scotia. Elsewhere in the Dominion it was very scanty.

DEPTH OF SNOW.

At the close of the month the ground was snow-covered from Saskatchewan to northern New Brunswick, the greatest depth being on the shores of Lake Huron, in the Muskoka district, and in New Ontario, where the covering was from 20 to 45 inches. In the Western Provinces there was from 2 to 14 inches of snow on the ground, while in Quebec the depth was from 13 to 24 inches.

THICKNESS OF ICE.

Thickness of ice is reported as follows:—

Western Provinces.—Battleford, 21 inches; Prince Albert, 13·5; The Pas, 12; Swift Current, 18; Qu'Appelle, 13; Minnedosa, 22·5.

Ontario.—Port Arthur, 14·5 inches; Port Stanley, 6; Ottawa, 20; Georgetown, 12; Gravenhurst, 2 to 4; Peterboro', 10.

Maritime Provinces.—Chatham, 10 inches; Sydney, 6; Charlottetown, 4·5.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, DECEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure. Mean reduced.	Highest.	Lowest.	Range.	Temperature. Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	Direction of wind from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Velocity of wind. Mean miles per hour.	Highest day's velocity.	Date and direction from.	Precipitation. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
	° ′	° ′		In.	in.	in.	in.	° ′	° ′		° ′		° ′		° ′	° ′																								
BRITISH COLUMBIA—																																								
Alberni (Beaver Creek)	49 15	124 49	300					38·4	+ 1·0	15	50·0	1 12	27·0	31	7·3																		9·41	2·20	1·72	19	12	0	0	0
Agassiz	49 14	121 31	52					39·6	+ 1·5	20	65·0	9	26·0	9	15·1																		6·70	−0·18	0·79	21	7	0	0	0
Atlin	59 35	133 38	2240	29·97	30·57	29·39	1·18	7·3	− 5	38·0		15	−21·0	12	8·5			8	6	19	16	1	9	6	1	0	2	8	62	1·3	12·0		1·17		0·32	12	19	0	0	4
Barkerville	53 2	121 35	4180	29·95	30·44	29·40	1·04	22·9	+ 0·3	22	38·0	13 14	−10·0	30	9·4			8	12	0	0	0	1	0	1	0	0	57	62	1·6	20·0		3·10	0·19	0·60	13	18	0	0	0
Bella Coola	52 10	126 54	150					31·4	+ 6·3	11	42·0	12-26	21·0	4	6·5																		1·16	− 0·62	0·72	18	13	0	1	0
Babine Lake	55 38	126 26						22·5	—	2	43·0	12	− 4·0	1-31	12·8																		2·70		0·62	11	20	0	0	0
Chilcotin (Big Creek)	51 10	123 0	3100					20·9		7	48·0	13	− 3·0	27	21·1																		1·09		0·40	5	26	0	0	4
Cranbrook	49 30	115 50						23·4		..	42·0	3	0·0	25	16·5																		2·10		0·45	11	17	0	0	0
Clayoquot	49 11	125 47	10					43·0	+ 1·6	11	53·0	18	28·5	31	8·8																		15·76	−0·33	2·60	23	8	0	0	0
Cowichan (Tzouhalem)	48 25	123 12	170					41·0	—	1	51·0	6	29·0	27	9·2																		8·67		1·88	17	11	0	0	0
Chilliwack	49 10	121 57	21					39·6	+ 2·1	10	51·0	19	25·0	31	8·3																		9·61		2·35	23	8	0	0	3
Enderby	50 32	119 7	1180					30·1	—	7	42·0	7-8	7·0	25	9·6																		3·56		1·46	8	23	0	0	0
Fort St. James (Stuart's Lake)	54 28	124 12	2280					23·5	+ 6·3	18	41·5	13	10·0	31	16·9																		1·95	+0·30	0·79	12	19	1	0	0
Fairview	49 11	119 36						21·9	—	2	42·0	1	0·0	31	13·6																		1·00	—	0·40	5	26	0	0	0
Fruitvale	49 9	117 31						29·3	—	1	39·0	6-13	5·0	31	8·8																		3·50		0·44	16	15	0	0	0
Fort St. John								11·2		1	50·0	20	30·0	29	21·3																		0·13		0·25	1	27	0	0	1
Glacier	51 14	117 29	4072					23·1	—	8	35·0	5	12·0	11 23	8·2																		2·85		1·10	21	19	0	0	0
Golden	51 16	116 55	2550					32·3	—	9	51·0	4-8	2·0	22	10·7																		1·25	—	0·42	4	27	0	0	0
Holberg	50 39	128 18						41·4	—	2	49·0	12	32·0	31	5·1																		15·73		2·42	22	3	0	0	0
Hedley	49 35	120 10						33·5	—	7	53·0	1-12	6·0	31	15·5																		1·15		0·52	9	22	0	0	0
Hedley (Nickel Plate)								22·0	—	7	50·0	20	− 6·0	31	15·5																		3·70		1·10	13	18	0	0	0
Hope	49 23	121 25						37·0	—	1	45·5	2	27·0	11	5·5																		8·21		0·77	20	11	0	0	0
Ikeda Bay	52 17	131 7	5					35·4		3	54·0	14	30·0	31	12·4																		8·80		0·60	31	0	0	0	0
Kamloops	50 41	120 20	1245	30·03	30·57	29·47	1·10	31·7	+ 1·2	20	46·0	8	10·3	27	9·2		87	8	14	2	3	30	7	2	0	9	0	9	62	5·1	17·0	12 N E	0·87	+0·05	0·30	11	20	0	0	0
Ladner	49 5	123 4						43·8		9	53·0	5	28·0	22	8·2																		5·15	+0·36	0·95	11	20	0	0	0
Massett, Q.C.I	53 58	132 9	30					40·3	+ 0·9	13	51·0	18	30·0	5-21	9·2																		7·17	+0·51	0·80	24	7	0	0	0
aNanaimo	49 10	123 37	125	29·90	30·40	29·30	1·10	40·8	+ 2·2	10	51·0	11	29·8	21	9·1		89	8	12	0	0	1	16	2	5	5	8	25	62	5·6	32·0	31 N W	6·71	+ 0·13	1·36	13	18	0	0	3
Nicola Lake	50 9	120 39	2120					32·2	+ 5·2	15	43·0	8-13	15·0	25	9·2																		0·70	− 0·36	0·25	7	24	0	0	1
North Nicomen	49 12	122 2	50					40·1	+ 2·0	17	52·0	19	29·0	26	8·8																		11·26	1·11	2·84	23	5	0	1	1
New Westminster	49 13	122 54	330	30·00	30·56	29·50	0·97	39·5	+ 0·7	23	49·2	1	25·2	31	6·7		98	8	18	0	1	27	2	0	5	2	0	22	62	3·5	16·0	21 S W	8·98	+ 0·31	2·12	16	11	2	0	8
Nelson	49 29	117 21	1760																																				
Needles								34·9		2	44·0	9-10	22·0	27-31	7·7																		2·40		1·20	6	25	0	0	0
Okanagan Mission (Kelowna)	49 52	119 29	1200					32·6	+ 1·9	11	43·0	7	11·0	25	8·7																		2·42	+ 1·13	0·85	13	28	0	0	0
Princeton	49 20	120 29	1650					25·9	+ 3·7	16	39·0	1-6	3·0	11	11·2																		1·70	+ 0·28	0·38	9	22	0	0	2
Penticton	49 29	119 35																																					
Pemberton Hatchery	50 20	122 33						33·2		3	42·0	1	18·5	31	6·0																		3·88		1·30	12	19	0	0	0
Prince Rupert	54 18	130 18	170	29·82	30·30	29·31	0·99	39·8		1	59·0	19	25·0	31	7·7		90	9	23	3	13	11	11	10	1	0	0	13	62	7·0	40·0	18 N E	24·61		2·82	25	1	0	0	0
Quesnello	52 59	122 30	1700					22·4	1·8	16	43·0	13	1·0	5-31	14·8																		1·35	+ 0·17	0·35	10	21	0	0	0
Revelstoke	51 0	118 6	1176					30·7	+ 3·7	11	42·0	4	18·0	22	8·1																		8·71	+ 1·81	1·20	22	9	0	0	0
Rossland	49 5	117 48	3100					29·0		7	35·5	6-7	18·0	22 25	1·8																		2·30		0·75	17	11	0	0	5
Ruskin (Stave Falls)	49 16	122 23	125					43·7	—	2	57·0	10	16·0	31	15·6																		13·24		2·24	26	5	0	0	1
Salmon Arm	50 12	119 35	1152					31·3	—	9	42·0	7	14·0	27	7·2																		1·89		0·55	14	17	0	0	2
Steveston (Garry Point)	49 21	123 17						40·8	+ 1·9	15	51·5	21	27·5	31	9·2																		6·17	+0·89	2·11	17	11	0	0	1
Swanson Bay	50 37	126 53						35·1		3	46·0	12-16	31·0	5-27	3·1																		11·15		3·03	30	1	0	0	0
Salt Spring Island	48 50	123 20						39·8	—	2	50·0	2	29·0	27	9·3																		7·15		1·72	15	16	0	0	0
Summerland	49 37	119 0	1100					30·6	—	1	49·0	1-13	11·0	25	8·5																		1·17		0·40	4	27	0	0	1
Sooke	48 41	123 44	25					42·2		1	52·0	2-21	29·0	31	10·1																		9·70	—	2·30	20	11	0	0	2
Stewart	56 1	130 1	215					29·4		1	37·0	17-26	7·0	31	5·8																		11·90		4·13	21	10	0	0	0
Tobacco Plains (Elko)	49 1	115 5	2684					31·0	+ 3·1	15	39·0	25	14·0	25	5·9																		2·16	+ 0·91	0·60	7	21	0	0	2
Triangle Island	50 52	129 5	680																																				
aTranquille	50 41	120 29																																					
Vernon (Coldstream Ranch)	50 14	119 15	1570					30·2	+ 2·3	15	41·0	4-7	11·0	25	8·0																		2·33	+ 1·08	1·30	10	21	0	0	0
Victoria	48 25	123 19	85	30·08	30·51	29·57	0·97	42·8	0·0	18	51·5	1	30·3	31	5·8		91	8	13	20	8	6	2	2	13	5	3	3	62	7·8	28·0	—	6·41	+ 0·11	1·46	21	10	0	0	1
Vancouver	49 17	123 5	136	30·11	30·59	29·68	0·87	41·0	—	6	52·7	1	27·9	31	5·8		92	8	16	0	2	22	11	1	6	3	1	10	62	4·2	12·0	26 W	8·79		2·07	25	6	0	0	5
Winter Harbour	50 32	128 3						42·6	+ 1·7	15	52·0	15	32·0	21-31	7·5																		19·24	+11·89	1·71	29	2	0	1	0
Wilmer	50 34	116 14						21·7	—	2	37·0	9	1·0	22	11·4																		0·68		0·15	9	22	0	0	0

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, DECEMBER, 1910.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
	° ′	° ′		in.	in.	in.	in.																																	
SASKATCHEWAN—*Con.*																																								
Rosthern	52 40	106 20	1657					5 7			1 36·0		22 — 28·3		31 19·3																		0 60	—	0 30	12 20	0	0	1
Swift Current	50 20	107 45	2139	30·00	30·51	29·31	1·17	18·6	+ 0·8	21	37·0	19	— 19·0		31 13·0					2	2	5	2	7	10	35	16	11	93				0 27	— 0 14	—	8 20	0	0	0
Saskatoon	52 15	106 30	1571					7·5	— 0·1	10	37·5	22	— 25·2		31 18·6																		0 50		0 30	3 28	0	0	0
Strassburg	51 5	104 56						7·1	—		1 35·0		21 — 22·0		6 19·1																		1 60		0 84	2 20	0	0	0
Scott (Hearts Hill)	51 59	109 30																																						
Waseca	53 6	109 29						6·5	—		1 10·0		20 — 27·0		31 19·7					1	2	5	2	1	3	6	7	4	31				0 50	—	0 30	4 27	0	0	0
Yorkton	51 11	102 29																																						
MANITOBA—																																								
Almasippi	49 11	99 20						8 0	—		8 40 0	21	41 0		30 18 0																		1 80		0 80	6 25	0	0	0
a Aweme (St. Alban's)	49 12	99 33	1180	28·77	29·25	28·25	1·00	6 0	— 0 9	26	38·5	21	— 32 0		30 19·2																		1 21	+ 0 29	0 41	11 20	1	0	0
Brandon	49 51	99 57	1176					5 3	— 5 8	21	33·9	11	26 — 32·8		30 21·2			6	6	1	26	7	2	0	6	19	32	0	93	1	11	—	1 10	+ 0 51	0 30	5 26	0	0	0
Berens River	52 18	97 23	710					3 1	—		3 33·0	23	11·0		30 23·9					19	3	8	12	10	1	2	6	0	62				1 35	—	0 10	8 23	0	0	0
Carberry	49 52	99 20	1258						—		6																						2 20	—	0 40	6 25	0	0	0
Carman	49 31	98 0	872																																					
Cypress River	49 33	99 3	1232																																					
Dauphin	51 8	100 2	957					—			5 57·0	11	— 38·5		30 —																								
Hillview	49 55	100 33	1100					3·9	2·3	25	32·0	26	31·0		29 16·2			5	11	0	0	19	8	0	11	3	19	0	93				1 10		1 00	2 20	0	0	0
Minnedosa	50 15	99 50	1686	30·08	30·66	29·39	1·27	5·0	4·1	30	33·0	11	10·3		30 20·0			6	7	0	2	3	2	0	1	13	9	32	62				1 20	+ 0 62	0 10	6 25	0	0	0
Morden	49 11	98 6	978					9 3	—		7 41·0	21	35·0		30 19·9																		0 76	+ 0 11	0 29	12 19	1	0	2
Moose Horn Bay (Atikensville)	51 15	99 33						3·1	—		1 46·5	22	15·0		30 18·2					18	5	5	7	11	2	2	6	3	62				1 41	—	0 25	15 16	0	0	0
Ninga	49 14	99 51	1649					7·6	—		1 38·2	21	28·9		29 16·2																		2 15		0 45	16 15	6	0	1
Oakbank	49 57	96 12	800					5·5	+ 0·3	15	32·5	26	12·3		30 13·9					7	0	2	1	4	6	2	8	1	31				1 46		0 30	8 23	0	0	0
Pipestone	49 31	100 58	1100																														1 40	+ 0 88	0 30	7 21	0	0	0
Portage la Prairie	49 57	98 17	830					1·0	1·6	25	33·0	26	35·0		29 19·3																									
Portage la Prairie (2)	49 56	98 17																															1 20	+ 0 80	0 35	6 25	0	0	0
Pierson	49 11	101 5	1531																																					
Stony Mountain	50 10	97 11	803					1·5	0·5	28	32·0	22	26 — 40·0		30 23·1					8	4	2	13	7	7	3	18	0	62				0 91	0 38	0 30	5 26	0	0	1
Swan River	52 6	101 15	1112					4·5			3 42·0	17	— 42·0		29 17·6																		1 30		1 00	2 20	0	0	0
Treherne	49 39	98 40	1212					5·6	— 1·7	15	37·0	21	— 11·0		30 16·8																		1 46	+ 0 85	0 40	11 30	0	0	3
Virden	49 51	100 55	1411																																					
Winnipeg	49 53	97 7	760	30·12	30·70	29·52	1·11	3·9	— 1·5	36	31·0	26	— 42·0		30 20·0			6	1	8	1	11	7	1	2	10	11	0	62				1 87	+ 1 14	0 40	13 18	0	0	0
ONTARIO—																																								
Alton	43 51	80 5	1240					13 8	— 8 0	22	23 8	19	— 23 5		31 19 0			5	4	10	3	6	5	18	10	36	5	0	93	11	41	111								
Aurora	43 57	79 21	886					15 8			3 35 8	23	21 0		31 20·0																		1 30	+ 1 02	0 50	9 22	0	0	0
Agincourt	43 47	79 16	590					17 1	— 5 8	16	37·0	23	16 0		31 14 1					13	9	4	2	5	11	21	21	1	93				1 81	— 0 26	0 38	9 22	0	0	0
Barrie	44 23	79 41	839																														1 91	— 0 11	0 40	15 16	0	0	0
Beatrice	44 8	79 20	800					13 5	— 5 5	35	37·0	15	— 23·0		31 22·9			6	10	10	0	0	8	13	3	0	16	13	93	1	111	1 S W	3 75	0 46	0 90	12 19	1	0	0
Bruce Mines	46 18	83 55	596					13 5	— 5·2	12	35·0	11	— 23 — 32·0		31 19·0																		2 30	0 37	0 50	8 23	0	0	0
Birnam	43 2	81 45	600					21·0	5 1	27	35 1	19	— 6 5		22 11·6					8	6	3	6	11	16	5	2	2	62				5 80	2 00	2 25	13 18	1	0	1
Brantford	43 10	80 21	750					19 3	— 5·7	29	37·0	18	23 — 11		30 17·0																		1 90	0 81	0 40	9 22	0	0	0
Bloomfield	43 50	77 21	290					17 1	— 7 1	11	35·0	21	20 0		31 16 8																		1 70		0 90	3 28	0	0	0
Bancroft	45 1	77 50						9·0	— 10 0	21	33·0	18	21 — 32·0		30 23·7																									
Copper Cliff	46 30	80 59						9 8	—		5 33·5	19	27 — 29·0		31 21·2																									
Clinton	43 32	81 37						19 1	—		8 35·0		1 — 10·0		13 13·5					7	4	11	7	13	5	8	6	1	62				1 10		0 30	6 25	0	0	0
Coldwater	44 38	79 40	690					10·2	11·5	23	10·0		1 — 32·0		30 27·2																		1 25		0 60	17 14	1	0	0
Cottam	42 7	82 45	666					20·6	9 2	23	38·0		19 — 6·0		25 18·5					18	3	1	6	7	13	9	5	0	62				3 10	— 1 07	0 78	8 23	0	0	0
Chatham	42 23	82 12	595					21 8	— 6 1	21	37·0	1	27 — 2·0		16 15·9																		2 30	— 0 13	0 10	12 19	0	0	*
Cochrane	49 2	81 0	930	30·05	30·67	29·28	1·39	7 3			1 32 0	11	— 25 — 31·0		30 23·9					0	0	0	16	1	4	0	21	17	62				2 00	— 0 18	0 60	5 26	0	0	
Collingwood	44 31	80 2						23 3	1 8	17	41 0	19	— 5 0		30 17·0																		1 30	—	0 30	7 24	0	0	0
East Toronto	43 35	79 18						18 6	—		4 38·0	23	15·0		31 18·1																		3 36		1 10	10 21	0	0	0
Elora	43 11	80 24	1271					17 3	7 2	13	36·0	1	— 18·0		31 11 9																		1 71		0 36	13 18	1	0	0
Gravenhurst	44 54	79 20						12 4	— 9 1	10	37·0	14	33·0		31 24·8					20	8	11	21	5	7	2	6	13	93	11	V	15 S	2 75	0 16	0 50	13 18	0	0	0
Guelph	43 33	80 16	1050					17 4	— 6 5	24	35 0	19	5 0	13	16 11·7																		2 50	1 11	0 60	10 21	2	0	0
Grimsby	43 13	79 36	282					22 6	—		1 41 0	21	5 0		31 16·2																		1 81	0 73	0 80	10 21	0	0	0
																																	1 83		0 50	7 21	0	0	0

| ONTARIO—*Concluded.* | | |

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, DECEMBER, 1910.

a Barometer not reduced to Sea Level * Stations not furnished with Registering Thermometers.

STATION	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE. Mean reduced.	Highest.	Lowest.	Range.	TEMPERATURE. Mean.	Difference from average.	Years observed	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	DIRECTION OF WIND FROM N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	VELOCITY OF WIND. Mean miles per hour.	Highest day's velocity.	Date and direction from.	PRECIPITATION. Amount.	Difference from average.	Heaviest fall in month.	Days with .01 or more.	No. of fair days.	No. of auroras.	No. of thunder storms.	No. of fogs.
NEW BRUNSWICK—																																									
Bathurst	47 39	65 12	15																																						
Chatham	47 3	65 29	21	29·92	30·06	29·29	1·37	19·2	+ 0·7	35	41·5	25	6·5	18	15·3					7	2	11	0	0	9	25	7	1	62				4·09	+ 0·91	1·23	14	17	0	0	0
Dalhousie	48 1	66 22	30					17·9		35	39·0	0	1	10	0	31	11	1		0	3	3	1	0	1	21	2	3	31				2·12	— 0·63	1·15	4	25	0	0	0
Fredericton	45 57	66 38	164	29·94	30·10	29·26	1·44	18·2	0·6	38	46·5	21	25	15	0	18	17	8	87	6	7	5	3	6	3	4	5	33	41	3	93	9·0	22·7	16 NW	4·08	+ 0·57	1·50	10	21	0	0	0
Grand Manan	44 47	66 46	19	29·93	30·10	29·28	1·42	27·0	1·7	26	51·0	24	2·0	31	15·5					3	4	5	3	4	2	11	25	3	62				3·02	1·47	1·20	13	18	0	0	2
Moncton	46 9	64 47	50					20·8	0·2	13	49·0	30	5·0	17	18·9					3	2	3	2	5	3	5	2	17	31				1·85	0·76	0·75	6	24	0	0	1
*Point Lepreaux	45 1	66 28	30					25·3	0·3	32	45·0	24	2·0	31		6	77			15	10	3	2	3	10	5	2	33	81				2·90	0·50	1·10	9	22	0	0	3
St. John	45 17	66 1	70	29·92	30·03	29·21	1·45	23·3	0·9	38	47·7	30	2·7	16	14·1					9	9	0	4	2	7	1	25	5	62				4·16	+ 0·43	1·91	15	16	0	0	1
St. Stephen	45 11	67 16	35					20·7	+ 0·9	13	49·0	24	20·0	18	13·9																		3·72	+ 0·33	1·34	5	26	0	0	0
Sussex	45 38	65 38	60					19·4	— 0·3	13	49·0	30	11·0	18	18·0					0	1	1	2	1	1	6	9	16	31				4·69	+ 0·74	1·50	6	25	0	0	0
NOVA SCOTIA—																																									
Antigonish	45 38	61 59	50					21·0		1	52·0	26	31 —	8	0	19	16	1															2·05	—	1·25	3	28	0	0	0
Halifax	44 39	63 36	88	29·90	30·01	29·18	1·46	27·1	— 2·2	36	49·0	30	2·7	19	11·1					3	13	3	2	2	10	6	22	1	62				4·59	—	1·30	14	17	0	0	1
Port Hastings	45 39	61 32	45							18										0	1	1	3	0	6	0	15	0	31				3·76	+ 0·26	1·68	6	25	0	0	0
Parrsboro'	45 23	64 19	100					20·7	— 2·2	11	51·0	30	7·0	8	21·7																		—	—	—	—	—	0	0	0
Sydney	46 10	60 10	35	29·85	30·17	29·02	1·45	28·6	0·6	37	51·0	30	7·5	18	12·6				8	13	3	5	2	2	4	7	13	22	1	62				6·19	+ 0·50	1·58	15	16	0	0	0
*Sable Island, E. Point	43 58	59 46	235																																						
Truro	45 22	63 18	77					23·8	— 0·8	36	51·8	25	16·2	18	17·8				7	9	6	10	3	6	6	16	19	21	6	93				4·36	— 0·31	1·56	19	21	0	0	2
Windsor	44 59	64 6	100					24·7	—	8	53·0	31	0·5	19	15·1																		3·72	—	1·40	13	18	0	0	0
*Whitehead	45 15	61 8	20					29·0	— 1·4	27	45·0	25	30	10	0	31	—																2·53	— 1·28	1·13	4	25	0	0	1
*a*Wolfville	45 7	64 20		29·82	30·01	29·19	1·45	26·2	+ 0·3	10	51·8	30	2·1	16	13·4					3	6	1	2	8	9	9	16	5	62				4·89	+ 0·82	1·05	11	20	0	0	0
Yarmouth	43 50	66 2	65	29·93	30·72	29·30	1·42	28·8	2·1	30	49·1	25	8·7	16	31	12·9				13	7	5	3	5	6	4	18	1	62				2·99	— 1·76	0·84	18	13	0	0	2
P. E. ISLAND—																																									
Charlottetown	46 14	63 10	38	29·88	30·00	29·23	1·37	24·0	— 1·1	35	45·0	25	1·0	19	13·1					2	5	0	3	9	7	21	9	3	62				3·30	— 0·11	0·88	12	19	0	0	0
Charlottetown (2)	46 12	63 10	75					23·9	—	1	46·5	25	0·5	19	14·7																		3·90	—	1·20	16	15	0	0	0
NEWFOUNDLAND																																									
*Amour Point	51 28	56 51																																							
Burin	47 0	55 10	27	29·81	30·50	29·20	1·21	30·3	—	2	47·0	20	21	10	0	31	13·2						7	3	0	7	6	14	6	19	0	62				6·03	—	1·24	19	12	0	1	0
*Cape Norman	51 38	55 52																																							
Fogo	49 43	54 17	30	29·71	30·39	28·77	1·62	28·2	—	1	45·0	20	1·0	31	9·9					19	19	4	2	1	3	9	36	0	93				1·20	—	0·39	9	22	0	0	0
*Point Rich	50 42	57 25	35					21·2	+ 2·0	28	44·0	24	2·0	31						10	5	2	1	1	17	8	13	0	62				3·61	—	0·58	16	15	0	0	0
Port aux Basque	47 35	59 10	27	29·78	30·39	28·86	1·53	28·0	—	2	44·0	20	8·5	31	9·6					14	16	8	1	8	8	25	13	0	93				0·47	— 2·69	0·23	9	22	0	0	0
St. John's	47 34	52 42	125	29·70	30·37	28·81	1·53	29·9	+ 1·0	37	52·0	21	7·9	31	11·7					6	8	2	6	1	6	11	21	1	62				6·37	—	0·90	25	6	0	0	0
																				9	0	2	1	9	7	18	10	3	62				5·60	+ 0·16	1·13	16	15	0	0	3
BERMUDA—																																									
Prospect	32 17	64 30	151	30·13	30·15	29·64	0·81	69·6	— 1·1	19	71·0	6·7	17·6	14	10·3		79			11	2	1	2	8	5	13	13	1	62	13·8	24·0	—	1·38	—0·69	1·36	21	10	0	2	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c., DURING DECEMBER, 1910.

STATIONS.	RAINFALL.					SNOWFALL.				REMARKS
	Amount in inches	No. of Days '01 or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alkali Lake						7·3	7	2·0	26	Fog on 17.
Annis	1·10	10	21	0·31	7	25·8	9	7·1	23	
Beaver Lake	6·09	11	20	2·40	22					
Coquitlam	11·11	12	19	2·56	22					
Denman's Island	7·18	10	21	1·29	5					
Ferguson						65·5	12	12·0	26	
Goldstream Lake	10·97	23	8	2·47	23	3·5	1	3·5	22	
Grand Forks	0·93	7	21	0·32	2	12·3	10	4·1	29	
Hydraulic	0·80	2	29	0·40	1-15	37·0	16	4·5	30	
Jordan River	14·18	22	9	2·82	23					
Jordan River (Bear Creek)	15·56	20	11	2·47	5	1·0	1	1·0	21	
LittleQualicum(French Creek, V.I.)	3·51	11	20	0·96	22					Fog on 20.
Monte Creek	0·02	1	30	0·02	4	16·8	3	15.5	24	
Naas Harbour	13·72	16	15	1·80	12	36·0	7	11·5	10	
Skidgate	9·75	26	5	1·61	12	4·2	2	2·8	31	
ALBERTA—										
Bardo						3·5	3	2·0	2	
Bismark						4·3	5	1·3	30	
Bruedorheim						8·0	3	5·0	1	
Bittern Lake						9·0	7	4·0	2	
Bantry										
Brooks						3·7	5	1·0	4	
Conjuring Creek						8·8	5	3·0	2	
Coutts										
Campsie						9·9	7	2·4	27	Fog on 11, 20.
Caldwell						2·5	5	0·8	3	
Dorenlee	R	0	28	R	18	9·0	3	4·0	3-31	
Elkwater										
Grassy Lake	1·00	1	29	1·00	24	4·0	1	4·0	27	
Jumping Pound	0·12	2	28	0·07	27	0·1	1	0·1	31	
Lacombe						1·0	1	1·0	25	
Langdon										
Loch Sloy						2·8	4	1·8	25	Aurora on 24, 25, 28.
Lyndon						3·6	2	2·0	24	
Macleod						4·0	3	2·0	31	
Minda (Many Berries Ranch)						7.0	2	4·0	24	
Mayton										
Okotoks						1·3	2	3·3	24	
Ponoka						7·0	3	3·0	2	
Sion						16·8	8	10·0	30	Aurora on 8.
Tilley						16·5	2	10·0	24	
Wabamun										
SASKATCHEWAN—										
Carmichael						12·0	4	4·8	27	
Elm How						5·5	6	3·0	30	
Gull Lake						18·5	5	6·0	24	
Hauley										
Kindersley						7·7	8	3·5	2	Fog on 28.
Kelvinburst						1·5	3	0·5	2-27	Fog on 11.
Last Mountain										
Maple Creek	0·25	1	22	0·25	24	10·0	8	2·0	24-30	
Willow Creek						6·5	3	4·0	3	
MANITOBA—										
Cartwright						9·0	7	2·0	2-24	
Deloraine						11·5	10	2·0	27	
Gretna						14·8	8	1·0	2	
Norquay						6·5	4	2·0	3-28-29	
Rapid City						8·1	8	3·0	30	
ONTARIO—										
Arden	0·29	1	26	0·29	19	12·0	4	7·0	24	
Deer Park	0·21	2	21	0·22	24	11·4	8	4·5	28	
Dutton						13·0	6	4·0	11	
Emsdale						17·8	9	8·0	24	Aurora on 6.
Goderich						33·0	10	5·0	7-31	
Georgetown	0·07	1	15	0·07	23	17·0	15	5·0	28	
Grantham	3·62	2	21	3·55	24	11·5	9	3·5	9	
Grand Valley						28·5	12	5·0	20	
MacCue						15·0	5	6·0	28	
Orangeville						22·7	13	8·1	29	
Princeton						19·5	5	8·0	28	
Sydenham						30·0	10	7·0	16	
Strathroy						41·8	13	11·0	20	
Watford						0·0	—	0·0	—	
Westport						25·0	9	4·5	26	
Wooler						13·0	6	4·0	20-28	
Westminster						24·0	5	8·0	20	
Wiarton	0·26	1	17	0·26	18	41·2	14	7.0	7-23	
Wesley						37·5	19	12.0	20	
QUEBEC—										
Timiskaming						12·5	7	3·0	13-23	
NEW BRUNSWICK—										
Point Escuminac	0·37	4	22	0·18	30	8·5	5	2·1	19-27	

MEAN PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY IN THE MONTH OF DECEMBER, 1910.

STATIONS.	Hours Ending																	
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.
Victoria						·01	·13	·21	·21	·23	·23	·12	·01					
Nanaimo							·05	·15	·18	·17	·32	·13	·00					
Vancouver						·01	·07	·10	·14	·16	·21	·21	·10					
Agassiz							·06	·20	·22	·20	·23	·12	·03					
Tranquille																		
Summerland						·01	·12	·18	·25	·21	·17	·06	·01					
Kamloops					T	·18	·25	·30	·31	·35	·12							
Edmonton						·11	·12	·18	·16	·18	·31	·18	·08					
Lethbridge						·21	·29	·37	·40	·41	·36	·34	·26					
Lacombe						·10	·32	·36	·38	·43	·32	·28	·13					
Dunvegan								·03	·13	·22	·18	·06						
Fort Vermilion						·01	·10	·18	·26	·33	·30	·08						
Battleford						·08	·11	·26	·29	·19	·35	·21	·01					
Indian Head						·01	·28	·15	·17	·18	·38	·14						
Moosejaw						·10	·34	·17	·20	·28	·21	·23	·30	·01				
Rosthern						·20	·15	·23	·19	·21	·30	·20	·14					
Brandon					·01	·28	·11	·20	·16	·16	·33	·16						
Winnipeg						·05	·12	·20	·26	·33	·36	·35	·21					
Haileybury						·08	·18	·18	·29	·29	·32	·28	·23					
Woodstock						·02	·07	·21	·25	·29	·32	·35	·23	·01				
Lindsay						·01	·25	·35	·43	·35	·41	·26	·10					
Barrie					T	·17	·20	·22	·30	·30	·26	·35	·08					
Toronto						·13	·27	·33	·39	·43	·43	·41	·33					
Kingston						·07	·33	·42	·40	·36	·38	·27	·20	·02				
Ottawa					·01	·25	·36	·45	·41	·41	·38	·35	·31	·02				
Montreal							·12	·21	·27	·27	·20	·19	·01					
Quebec						·03	·15	·20	·25	·29	·25	·33	·32	·20				
Sherbrooke						·01	·10	·20	·19	·23	·22	·21	·17					
Fredericton					·03	·21	·33	·41	·43	·45	·40	·38	·21	·01				
Charlottetown						·13	·23	·24	·29	·31	·26	·22	·20	·03				

—	Victoria.	Nanaimo.	Vancouver.	Agassiz	Tranquille.	Summerland.	Kamloops.	Edmonton.	Lethbridge.	Lacombe.	Dunvegan ...	Ft. Vermilion.	Battleford.	Indian Head.	Moosejaw	Rosthern.	Brandon.	Winnipeg.	Haileybury.		Woodstock.	Lindsay.	Barrie.	Toronto.	Kingston.	Ottawa	Montreal.	Quebec.	Sherbrooke.	Fredericton.	Charlottet'wn.	
Registered duration in hours	37	21	31	35	..	31	48	81	82	71	19	39	84	69	105	93	81	58	57		54	67	56	85	73	93	39	63	43	91	59	.
Percentage of possible duration %	14	9	12	14	..	12	19	35	33	30	9	20	36	28	42	40	32	23	22	..	19	21	20	31	27	35	17	23	19	44	22	..
Difference from average	− 1	—	—	− 0	..	—	—	—	—	—	..		+ 6	+ 6	—	—	− 2	−11	—	.	− 2	+ 3	0	+ 7	+ 2	+11	− 9	—	..	+10	—	..
Maximum percentage in one day %	73	45	75	67	..	58	62	73	95	86	52	71	79	69	90	91	78	93	88	.	79	76	83	88	76	91	61	89	68	95	81	..
Date of maximum	31	10	10	10	.	30	9	20	19	19	7	15	12	21	14	22	10	11	10	.	21	21	25	25	9	9	22	5	11	31	31	.
No. of days completely clouded	14	18	15	18	..	11	13	7	5	6	22	16	3	8	9	6	5	18	13	..	13	13	12	6	12	8	15	13	17	9	13	..

Aurora recorded:—

Where the class of aurora is noted by the observer, it is given, (I), being the brightest, (IV) the feeblest in brilliancy.

1. Fort Vermilion.
2. Waitefield, IV.
4. Waitefield, IV.
5. Gilt Edge, III; Waitefield, IV; Aitkensville, II; Madoc, IV; Gravenhurst, IV; Quebec, IV.
6. Emsdale, III; Waitefield, IV; Aitkensville, III; East Toronto, II; Lake Talon, Lakefield, Clinton, I; Birnam, III; Chicoutimi, Minnedosa, IV; Gravenhurst, IV; Kingston, II; Ft. Vermilion.
8. Sion.
12. Spirit River.
13. Kakabeka Falls, IV.
18. Spirit River.
19. Threehills Creek, IV; Kakabeka Falls, IV.
20. Threehills Creek, IV; Schreiber, IV.
21. Halkirk, Waitefield, IV; Aitkensville, IV.
22. Waitefield, III; Kakabeka Falls, I; Chicoutimi, Fort Vermilion.
23. Threehills Creek, IV; Chicoutimi.
24. Loch Sloy, Waitefield, III; Schreiber, IV.
25. Loch Sloy, Threehills Creek, III.
26. Fort Vermilion, Fort St. James.
27. Schreiber, IV; Fort Vermilion.
28. Loch Sloy, Aitkensville, IV; Kenora, IV; Fort Vermilion.
29. Aitkensville, IV; Aweme, II; Schreiber, IV; Kenora, III; Kakabeka Falls, III; Stanley Mission, IV.
30. Stanley Mission, IV.
31. Aitkensville, IV.

Thunder recorded:

3. North Nicomen.
18. Bella Coola.

FORECASTS FOR DECEMBER, 1910.

The forecasts issued by this office at 11 p.m. each night are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of these predictions issued during the month was 1251. These were divided as follows:—

District.	No. Issued.	Verified.			
		No. Fully	No. Partly	No. Not	Percentage.
Alberta	79	63	14	2	88·6
Saskatchewan	83	64	18	1	88·0
Manitoba	86	67	16	3	87·2
Lake Superior	99	73	21	5	84·3
Georgian Bay	115	82	27	6	83·0
Lower Lakes	121	92	24	5	88·0
Ottawa Valley	105	73	26	6	81·9
Upper St. Lawrence	105	77	24	4	80·5
Lower St. Lawrence	102	80	17	5	86·8
Gulf	102	85	14	3	90·2
Maritime Provinces West	126	85	26	15	77·8
Maritime Provinces East	128	92	24	12	81·2
Total	1251	933	251	67	84·6

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, Director.

Meteorological Office, Toronto,
February, 1911.

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